# An Analysis of the Health Component of the Honduras National Household Income and Expenditures Survey: The Role, Fee Structure, and Performance of the Ministry of Health

*June 2000*

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# Abstract

This report summarizes findings of the health module contained in the 1998 National Household Income and Expenditures Survey in Honduras and recommends steps to improve equity of access and cost for health services.

The ambulatory care consultation rate in Honduras is 2.1 visits per person per year, slightly more than the World Health Organization-identified minimum acceptable level of 2.0. The annual hospitalization rate, however, is only 3.3 percent. There is remarkable equality in the use of health care services in Honduras, with no systematic relationship between household income quintile and consultation rates. The high degree of equity is attributable to the equalizing role of the Ministry of Health (MOH), particularly with respect to its provision of primary care in small health centers. Overall it provides 61 percent of all ambulatory care and 71 percent of all hospitalizations, compared to the Social Security Institute, which provides a mere 3 percent of ambulatory visits and 7 percent of hospitalizations, and all private sector sources, which provide 35 percent.

The cost of MOH-provided care is low in absolute and relative terms, and substantially less than care in the private sector. These prices capture only a portion of the total costs of care, however: Half of MOH patients are directed by providers to purchase ancillary goods and services—most commonly medicines—from another, off-site source, and the practice is even more common among private providers. The cost of ancillary goods and services is considerable, averaging 57 percent of all patients' total ambulatory care costs and 25 percent of all patients' total hospital costs.

Although there is a high degree of equity in the use of services, the degree of equity in access to and cost for those services is highly unequal. The poor are more likely to pay for care than is any other household income quintile. Moreover, in most instances, MOH facilities charge the poor larger fees—in absolute terms—than they charge the average patient, and a high proportion of the total medical care given to persons with higher incomes continues to be provided by the MOH. Recovering a mere 2 percent of costs, the MOH user fee system is regressive and in need of reform so that it can be more productive, more equitable, and able to establish prices that signal to both patients and providers that it is consistent with MOH goals and priorities.

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# Acronyms

| | |
|---|---|
| **CESAMO** | *Centro de Salud con Médicos y Otros*, Health Center with Physicians and Others |
| **CESAR** | *Centro de Salud-Rural*, Rural Health Center |
| **ENIGH** | *Encuesta Nacional de Ingresos y Gastos de Hogares*, National Household Income and Expenditures Survey, 1998 |
| **HIV/AIDS** | Human Immunodeficiency Syndrome/Acquired Immune Deficiency Syndrome |
| **IHSS** | *Instituto Hondureño de Seguro Social*, Honduran Social Security Institute |
| **MOH** | Ministry of Health |
| **NHES** | National Health Expenditure Survey, 1995 |
| **NGO** | Nongovernmental organization |
| **PHR** | Partnerships for Health Reform |
| **Q1** | First (Poorest) Household Income Quintile |
| **Q2** | Second (Next to Poorest) Household Income Quintile |
| **Q3** | Third (Middle) Household Income Quintile |
| **Q4** | Fourth (Next to Richest) Household Income Quintile |
| **Q5** | Fifth (Richest) Household Income Quintile |
| **SPS** | San Pedro Sula |
| **USAID** | United States Agency for International Development |
| **WHO** | World Health Organization |

# Executive Summary

The purpose of this study is to provide a sound, empirically based understanding of the health care market in Honduras, with special emphasis on health-seeking behavior and the level of access to and utilization of care. This study also examines the role of the Ministry of Health (MOH) in the health care market of Honduras, fee levels and patient expenditures, and equity in access to and the use of care.

The basis for this report is the health module contained in the 1998 National Household Income and Expenditures Survey (*Encuesta Nacional de Ingresos y Gastos de los Hogares*, or ENIGH) conducted by the General Directorate of Statistics and Census together with the Central Bank of Honduras. The survey was based on a national probability sample consisting of 3,746 Honduran households, comprised of 19,218 persons, and it provides estimates that statistically represent the Honduran population. The health module consisted of 102 questions and is the basis for most of the analysis in this report. The results reported in this study are the weighted responses. The weight-derived estimated population of Honduras in 1998 was 6,198,827.

## Access to and Level of Use of Health Care Services

### Ambulatory Care Use and Market Shares

The ENIGH questionnaire contained a separate series of questions asking patients whether they had an acute illness or a chronic illness and the type of health care services they used for each. Because the recall periods for the different types of care varied, it was necessary to analyze each of these sets of responses independently.

Of those patients who responded, 19 percent reported they had been ill within the 30 days prior to being interviewed. The self-reported illness rate reported in five other Latin American countries is three to four times the rate reported by Hondurans. Of those reporting they were ill, 73 percent had an acute illness, 25 percent had a chronic ailment, 1 percent had both, and 2 percent did not identify the type of illness. The acutely ill either self-treated or sought care (95 percent), and 55 percent sought a provider's care. In comparison, persons with a chronic ailment were much more likely to have sought care rather than self-treated.

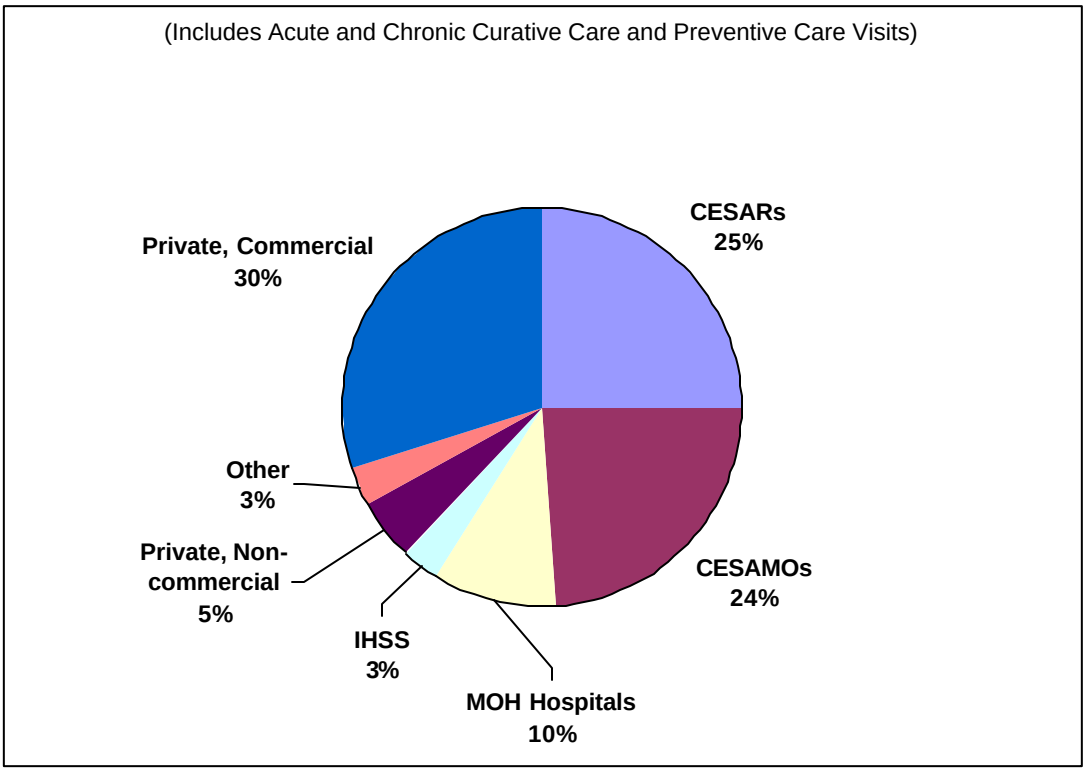
Extrapolating the number of chronic and acute illness visits reported, it is estimated that the total curative care provided in Honduras in a year is 9.5 million visits, of which 80 percent is for treating acute health problems. The average number of curative care visits per person in Honduras is 1.5. Two of Honduras' neighbors, Nicaragua and El Salvador, have curative care consultation rates that are only about half that amount.

According to the World Health Organization (WHO), the minimum acceptable care consultation rate for a country is 2.0; i.e., on average, each person should have at least two consultations annually. By annualizing the preventive care consultations and combining them with the curative care visits, it is estimated that the general consultation rate in Honduras is 2.1, slightly above the WHO minimum

standard, and that 58 percent of these visits are to treat acute illness, 15 percent are for chronic illness, and 27 percent are for preventive care services.

The MOH provides 61 percent of all outpatient care, the Honduran Social Security Institute (*Instituto Hondureño de Seguro Social*, IHSS) provides an additional 3 percent, and the private sector provides 35 percent (Figure ES-1). The private sector is dominated by the commercial sector, with the non-commercial sector accounting for only14 percent of the private sector total. Nongovernmental organizations account for only 1 percent of all care.

**Figure ES-1: Market Shares of Total Ambulatory Care**



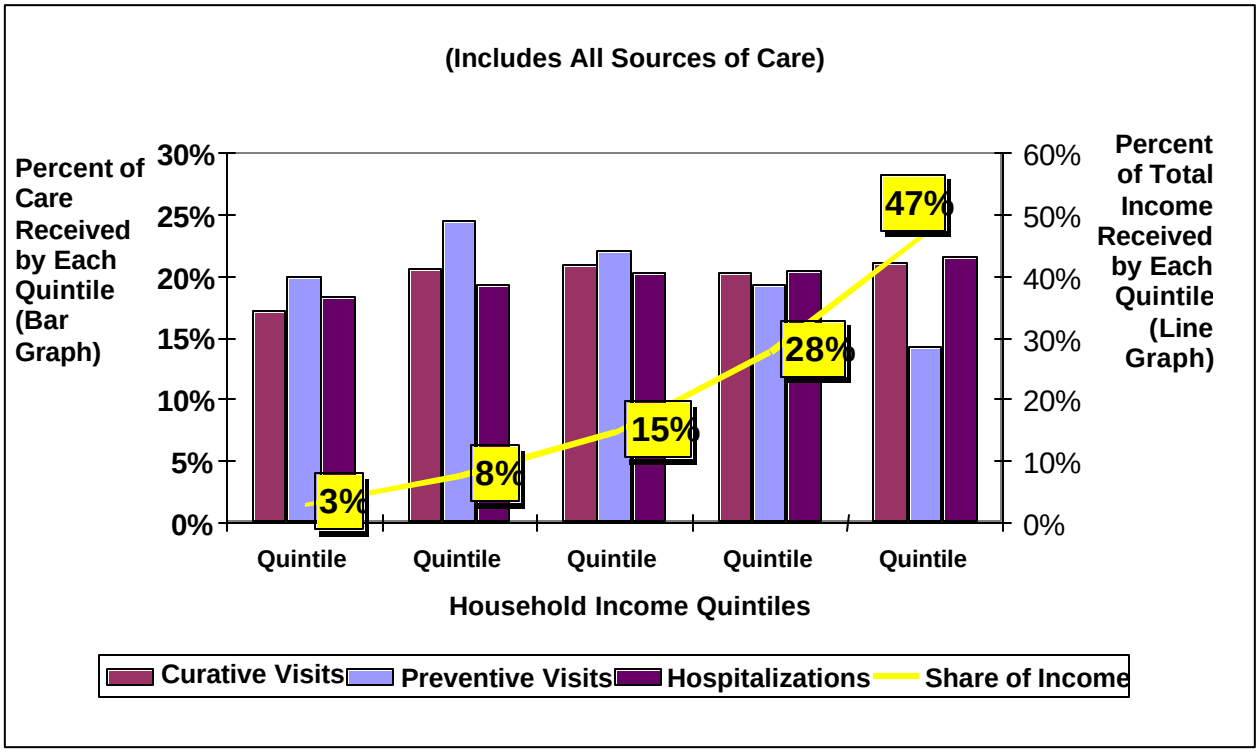

Nearly 210,000 Hondurans were hospitalized at least once in the 12-month period prior to the survey. The hospital coverage rate (i.e., the proportion of Hondurans with at least one hospitalization in the past 12 months) of 3.3 percent of the population is well below the usual 5 to 10 percent level of most Latin American countries. Even countries like El Salvador and Nicaragua that have relatively low hospitalization rates by international standards report rates that are more than 50 percent greater than Honduras' (Gomez 1990:64; David, et al., 1996:40).

Of those persons hospitalized in the previous year, 71 percent were treated in an MOH hospital. Whereas the private, commercial sector's outpatient care market share is 25 percent, its hospital market share is only 19 percent. The private hospital's share is as large as it is, and its hospital and ambulatory care shares are as similar as they are, because of the low, out-of-pocket cost to patients and the low coverage of IHSS, which has only 4 percent of the ambulatory care market and 7 percent of the hospital share.

## The Honduran Health Care Market and the Role of the Ministry of Health

The MOH is the chief provider of primary health care in Honduras, focusing more on the treatment of infectious disease and prevention and less on treatment of chronic conditions, and providing a disproportionately large share of the care for children, the poor, the rural population, and women. Children under five-years old have the highest per capita number of consultations, nearly two-and-a-half times the national average. Beyond age, there is little variation in the coverage of the health care system by population characteristics. As Figure ES-2 shows, the magnitude of household income and the consultation rate are not directly related, as is found in most countries. The coverage of the Honduran health care system is highly equitable.

**Figure ES-2: Distribution of Health Care and Household Income**




## Variations in Ambulatory Patient Mix: MOH versus Other Sources of Care

The illness mixes of patients of MOH and non-MOH providers are quite similar, although the MOH provides care for a larger proportion of infectious diseases, particularly respiratory illnesses and malaria/dengue. The Ministry provides nearly two-thirds of all the care that Honduran children receive and substantially more care to females than to males.

There is an inverse relationship between the household income quintile and the amount of care provided by the MOH. The poorest one-fifth of Hondurans obtain as much as 75 percent of their ambulatory care from the MOH. The other key distinguishing characteristic about MOH care is that it provides 84 percent of all preventive care.

### Variations in Patient Mix Among MOH Facilities

The proportion of patients who are chronically ill steadily increases along the MOH infrastructure pyramid, rising from 11 percent to 52 percent, beginning at the CESARs and CESAMOs and moving up to the area, regional, and national hospitals. Whereas the hospitals account for a disproportionate amount of MOH care for chronic illness, the CESARs and CESAMOs treat relatively more infectious diseases and 65 percent of the curative care visits provided to patients less than 15 years of age. Although the MOH is clearly the key primary health care provider in Honduras, it is the CESARs and CESAMOs, and not the MOH hospitals, that give the Ministry that distinction and constitute the heart of the primary health care system of Honduras.

## Patient Expenditures for Health Care

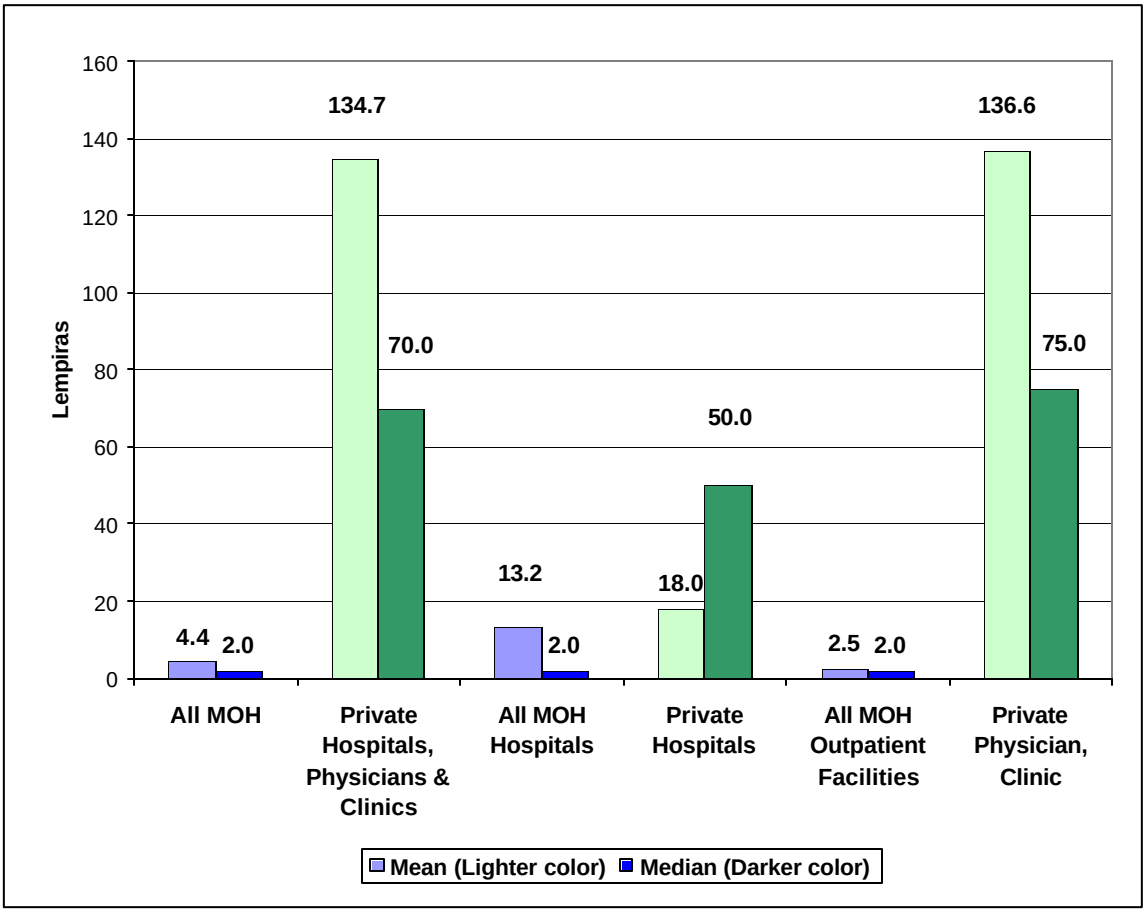
The ENIGH questionnaire was designed to gather information on the total costs associated with obtaining health care, and, therefore, questions focused on indirect costs (transportation, food, and lodging) as well as direct costs.

### Patient Expenditures for Ambulatory Care for Acute Illness

Throughout the health sector, patients paid a mean of 57 lempiras and a median of 3 lempiras for an ambulatory visit to receive acute care. Of those individuals who reported having an acute care visit, 85 percent paid for the visit. A surprising finding was that persons who were treated at either a CESAR or a CESAMO were just as likely to pay something for their care as were the users of a private hospital: 89 percent of the patients of each of these sources paid for their care. Another surprising finding was that only 64 percent of MOH hospital ambulatory patients paid something for their care compared to 89 percent at primary health care facilities. These relative rates of exoneration provide perverse incentives to MOH would-be consumers and encourage an inefficient use of MOH resources. Patients with acute illness are more likely to use relatively scarce and more costly hospital ambulatory care as opposed to the more abundant and less costly to operate CESAMOs and CESARs. The incentives provided to patients also tend to exacerbate congestion at the hospitals, increase the costs of the MOH, and may have contributed to two trends in the use of MOH services: (1) the growth rate of the average number of ambulatory care visits at regional and area hospitals increasing at a rate 47 percent faster than that of CESAMOs from 1995 to 1999 (22 percent versus 15 percent, respectively), and (2) the share of all hospital ambulatory care that was provided in the emergency department increasing 35 percent over the same period. The emergency department's share increased from 23 percent in 1994-1995 to 31 percent in 1997-1998, far in excess of the 10 percent that the Pan American Health Organization has identified as the maximum in a well-functioning health care system.

Figure ES-3 presents comparisons of average prices paid for acute ambulatory care in the private, commercial sector and the MOH. Averaged over all MOH facilities, the mean is 4.4 lempiras and the median is half that at 2.0. These payment levels are low—the equivalent of 0.03 percent of the average per capita income of US$740 in Honduras in 1998. The mean private, commercial sector payment was more than 30 times the MOH average, and the median was 35 times greater. When the CESAMOs and CESARs are compared with private physicians and clinics, the differences are even greater; the private mean patient expenditures is 55 times greater at 2.5 and 136.6 lempiras, respectively.

**Figure ES-3: Average Price Paid for an Acute Outpatient Care Visit: Comparisons of Private, Commercial and MOH Patients**




### Purchases of Ancillary Goods and Services for Acute Illness Care

Nearly half of the persons who visited a health care facility in the past 30 days for acute illness were prescribed medicines to be purchased from a place other than where they received their consultation, and as much as 86 percent of these patients did purchase their medicines elsewhere. Thus, for 42 percent of the acute care patients, the cost of the consultation was not the full (direct) cost of their care.

Several possible reasons why they were directed to purchase medicines elsewhere are identified in the text. This practice is much more common in the private, commercial sector, where about 70 percent of patients reported that they were prescribed medicines that needed to be purchased elsewhere. In contrast, among MOH patients, only about half of this proportion purchased such prescriptions. Within the MOH, the patients of the CESARs and CESAMOs are less likely to have additional medicines prescribed and less than half are likely to comply with the provider's instructions to purchase them. The cost of such items is considerable. Averaged over only those persons who purchased them, the mean value of medicines was 195 lempiras and the mean value of examinations was 109 lempiras.

### Average Total Patient Costs of Ambulatory Care for Acute Illness

Averaged over all sources of care, the patient's mean total cost of ambulatory care was 155 lempiras. The cost of the consultation was generally less than 40 percent of the total treatment cost (i.e., the sum of the consultation cost and the cost of other medicines, examinations, and equipment purchased elsewhere). Even in the private sector where patient consultation fees are much higher than the MOH's, the average costs of ancillary goods or services purchased elsewhere exceeded the average consultation fee.

The high proportion, 61 percent, of total payments made for ancillary goods and services purchased elsewhere is striking. The high proportion of persons who obtain ancillary services at a different site implies that the treatment of a single illness episode is commonly fragmented, which may have adverse consequences for the quality of care provided in Honduras. For every lempira Hondurans spend at an outpatient visit to treat an acute illness, they spend 1.6 lempiras elsewhere for ancillary goods or services. In the case of MOH patients, for every lempira they pay in consultation fees, they spend 7.5 lempiras elsewhere for ancillary goods and services. The fact that patients' consultation fees are less than half of the total costs of their care must be taken into account when considering MOH user fee levels. The initial impact of increasing MOH user fees may likely be a reduction in the proportion of persons who comply with the prescription to purchase ancillary goods and services elsewhere. Therefore, simply tracking changes in utilization would not reveal the impact caused by increasing MOH user fees, yet this change could be significant in reducing access to, and the quality of, care.

## Patient Expenditures for Ambulatory Care for Chronic Illness

Persons who received ambulatory care for a chronic illness paid a mean of 108 lempiras and a median of 2 lempiras, and 59 percent of the individuals seeking care reported paying for the visit. When those who did not pay for their care (41 percent) are excluded from the calculation, the mean payment level jumps to 182 lempiras and the median increases dramatically to 40 lempiras. Although slightly more chronically ill persons are exempted from payment than those with an acute illness, their average payment is two to three times higher. The average level of fees is different, but variations in chronic illness care fees across provider types are very similar to those observed for acute illness care. IHSS patients were the least likely to pay anything for their care, and private physician and clinic patients were the most likely to have paid. Surprisingly, patients of CESAMOs were more likely to have paid for their care than patients of private hospitals.

The structure of exonerations within MOH facilities parallels that of acute care, providing chronic illness patients with an even greater incentive to use the MOH pyramidal referral network in the reverse order of what is intended. Persons obtaining care for chronic illness at an MOH hospital were two-and-one-half times *less* likely to *have not* paid anything for their care than were patients at CESAMOs and CESARs. The mean fee paid at MOH hospitals, however, was three-and-one-half times higher, although the medians were both 2.0. When including only those patients who paid something for their care, the mean payment at MOH hospitals was six times greater than at CESAMOs and CESARs, and the median was 3 lempiras. As judged by the median, MOH patients are not motivated by financial considerations to use the lower tiers of care first.

### Purchases of Ancillary Goods and Services for Chronic Illness

Of those persons who had an ambulatory care visit for a chronic illness and were prescribed medicines to be purchased elsewhere, 40 percent reported having bought them. This is roughly the

same proportion as that of patients who had an acute illness; however, a substantially larger proportion of chronically ill persons also purchased ancillary examinations. The private hospitals, physicians, and clinics have the highest percentages of patients who purchase medicines and examinations elsewhere—more than 70 percent overall (about 25 percent from each type of providers). Although MOH patients are much less likely to do so, nearly one-third of them reported purchasing medicines elsewhere and about 5 percent purchased exams elsewhere.

The chronically ill spent a mean of 375 lempiras on medicines and 291 on examinations, about twice the amount spent by the acutely ill. Just as with acute care patients, the chronically ill who visit private hospitals, physicians, and clinics are more likely to be prescribed ancillary goods and services, purchase them, and pay significantly more for them. The overall MOH mean payments were 173 lempiras for medicines and 138 for examinations, both of which are about 40 percent of their respective private sector averages.

**Average Total Patient Expenditures for Chronic Illness**

The average total cost for treatment was much higher for patients with chronic illness than for those with an acute illness. The mean chronic illness cost was 315 lempiras—twice the acute mean cost—and the median chronic treatment cost was 45 lempiras—41 percent greater than for acute treatment. Just as with acute illness care, the consultation cost was less than expenditures for ancillary goods and services, and consultation fees were roughly 40 percent of total treatment costs.

Table ES-1 presents summary data for the different prescribing and charging practices of the MOH and of private, commercial providers and shows that, for acute and chronic ambulatory care, total treatment costs of a private provider's patient are six to eight times higher than those of an MOH patient. This is because private providers' consultation fees are higher, they are more likely to prescribe ancillary goods and services that must be purchased off site, and their patients who actually purchase these ancillary goods and services pay substantially more than the average MOH patient does. This suggests that the financial disincentives to entering the private sector and the incentives for using the MOH are much greater than would appear to be the case from a review of only the relative user fee levels.

**Table ES-1: Comparisons of the MOH and Private, Commercial Providers' Charging and Prescribing Practices**

| | Percent of Patients Who Paid for Care | Patients Who Were Prescribed Medicines to be Bought in Other Than the Place of the Consultation | | Percent of Patients Prescribed Ancillary Exams to be Bought Elsewhere and Who Purchased Them |
|---|---|---|---|---|
| | | Percent of All Patients | Percent Who Bought the Medicines | |
| **Acute Illness Care** | | | | |
| All MOH Sources | 85% | 24% | 69% | 5% |
| Private Physicians, Clinics & Hospitals | 94% | 70% | 98% | 12% |
| **Chronic Illness Care** | | | | |
| All MOH Sources | 77% | 52% | 34% | 8% |
| Private Physicians, Clinics & Hospitals | 92% | 77% | 75% | 27% |

| | Mean Consultation Fee Payment | Mean Payment for All Ancillary Services Purchased Elsewhere | Indirect Costs (Transportation, Food, Lodging) | Average Total Cost of Care |
|---|---|---|---|---|
| **Acute Illness Care** | | | | |
| All MOH Sources | 4.4 | 28.6 | 6.5 | 39.6 |
| Private Physicians, Clinics & Hospitals | 134.7 | 188 | 21.1 | 343.8 |
| **Chronic Illness Care** | | | | |
| All MOH Sources | 18.2 | 71 | 31 | 120.2 |
| Private Physicians, Clinics & Hospitals | 307.5 | 450 | 40 | 797.5 |

## Patient Expenditures on Preventive Care

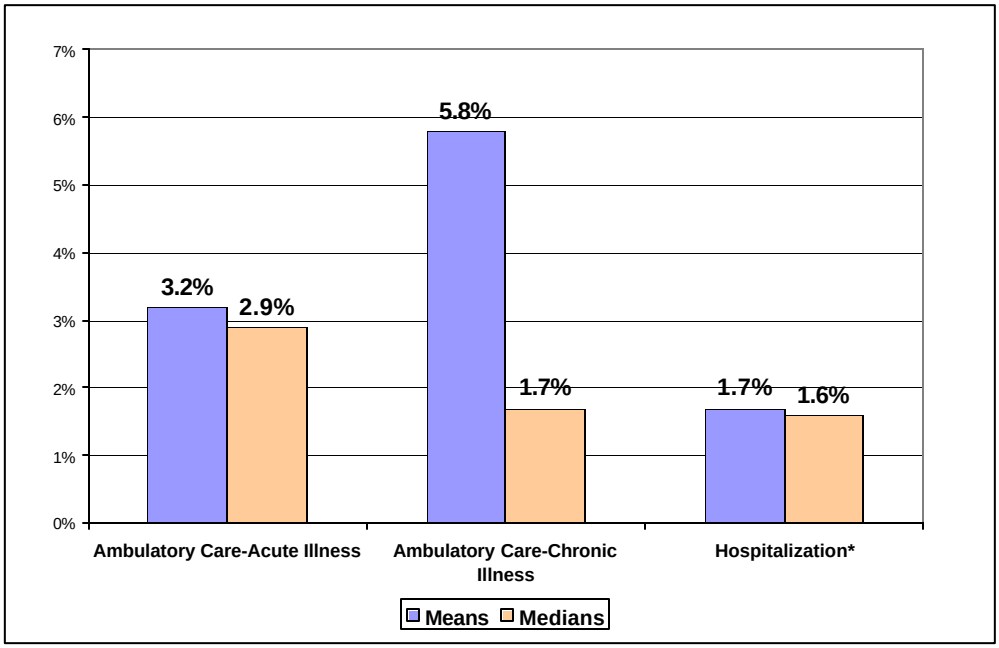
The MOH needs to do a better job of communicating and monitoring its free care and priority services policy. The MOH provided 89 percent of all preventive care free of charge, yet 79 percent of the relatively small number of persons who obtained their preventive care from private hospitals, physicians, and clinics paid for preventive services. The vast majority of preventive care was provided by CESAMOs and CESARs, where fewer than 10 percent of patients were charged.

This survey included four preventive services that the MOH mandates to be provided free of charge in its facilities: family planning, immunizations, prenatal care, and growth and development. Of those persons who reported having one or more preventive service in the past three months, 76 percent had one or more of these four MOH priority services. Contrary to the MOH mandate, 7 percent of these individuals—more than 36,000 persons—paid for them.

## Hospitalization Fees

Of those persons who were hospitalized in the past year, 30 percent paid nothing either to the hospital or to a physician for their hospitalization. As much as 72 percent of those hospitalized were treated at MOH facilities. The overall mean total payment for in-hospital care was 1,234 lempiras, and the median was 50. The mean private hospital inpatient care payment was 5,043 lempiras and the median was 1,580 lempiras. The corresponding MOH figures were 109 lempiras and 40 lempiras, respectively. That is, both the mean and median payments for MOH hospital care were about 2 percent that of private hospitals. These relative proportions—the average payments of MOH patients as a percentage of those of private hospitals, physicians, and clinics—are about one-half their corresponding curative ambulatory care relative sizes. Figure ES-4 shows these relative price levels.

**Figure ES-4: MOH Patients' Average User Fee Payments as a Percent of Private Sector Patients' Average Payments**




### Purchases of Ancillary Goods and Services for Hospitalization

Throughout the health sector, 54 percent of all persons who were hospitalized reported that they had purchased some type of ancillary goods or services. By far the item most commonly purchased was medicines (47 percent of patients), followed by examinations (19 percent); an additional 5 percent had purchased supplies, and 1 percent, equipment. This is the same pattern that was found with curative ambulatory care (the combination of acute and chronic). These proportions varied substantially by type of ancillary good or service, subsector, and type of hospital. The probability of having to purchase some ancillary good or service, however, is generally high. The practice was even common among IHSS patients (41 percent), who, in the case of outpatient care for acute or chronic illness, had the lowest proportions of persons having purchased extra items. Compared to MOH hospitals, patients of private hospitals were 40 percent more likely to have purchased medicines and nearly twice as likely to have purchased examinations. Within the MOH facilities, it was the patients of the national and regional hospitals who were most likely to have purchased any of the ancillary items. The average MOH patient had spent nearly 300 lempiras, less than one-third of the typical private sector patient.

Whereas 76 percent of private hospital expenditures were in-hospital payments, the corresponding figure for MOH hospitals was 19 percent. The direct payments made by patients hospitalized at MOH facilities constituted a relatively small share of the total costs of their care. (This was also seen in patients paying for MOH outpatient care.) Even patients' indirect costs for transportation, food, and lodging exceeded their in-hospital payments. The fact that the average MOH hospital patient's fees are only one-fifth that of the patient's total hospitalization-related costs must be considered when discussing the possibility of changing MOH user fee levels. These payments for ancillary goods and services are "hidden" fees, which further constrain would-be patients' willingness and ability to pay for care. Thus, there is less room for increasing fee levels

without having a deleterious impact on access and utilization and the quality of care received than is suggested by simply looking at the inpatient fee levels.

## Equity

Although the MOH is the primary source of care for the poor, the MOH's user fee system does an inadequate job of protecting these people. The poor are more likely to pay for curative outpatient care, preventive outpatient care, and inpatient care. In fact, in most of the analyses conducted, the poor have a higher likelihood of having to pay for care than do patients from any other income quintile. Moreover, in most instances, MOH facilities have been found to charge the poor larger fees (in absolute terms) than they charge the average patient. This finding persists whether the analysis is conducted at the national level, within any of the four geographic strata, or within any of three types of MOH hospitals (with one exception). It must be concluded, therefore, that the MOH's user fee system is inequitable and regressive. This does not appear, however, to have deterred the poor from using care provided by MOH; there is a high degree of equity in the coverage and use of MOH services. With the current need to increase MOH user fee levels, however, the Ministry will have to improve the way in which it administers its user fees; otherwise, the higher fees may become an obstacle to the poor.

The highly equitable health care coverage and utilization rates of Honduras are attributable primarily to the equalizing role the MOH has played in providing care in rural areas and to the poor. Although all household income quintiles use health care services (of all sources) almost equally (refer back to Figure ES-2), when the analysis is narrowed to MOH services, a clear inverse relationship exists between the proportion of care provided by the Ministry and the household income quintiles. This reflects the increasing number of persons in progressively higher income quintiles who are choosing to self-select out of the MOH market and, for the most part, opting into the private sector. Still, a large proportion of the total medical care of persons with higher incomes continues to be provided by the MOH. For example, 53 percent of the highest income quintile's hospital admissions are to MOH facilities, as are 65 percent of the next to highest quintile's.

If each income quintile consumed exactly its proportionate share of MOH care, each would use 20 percent. The actual proportions of the richest two quintiles do not deviate much from that proportion. The highest income quintile accounts for 16 percent of all MOH hospitalization, and the fourth quintile accounts for 19 percent. It may be inferred that the low fee levels charged to MOH patients, independent of their income, has encouraged relatively well-to-do Hondurans to unnecessarily rely on the MOH and has contributed to the retarded pace of growth of the private, commercial sector. As a result, the clientele of the MOH is larger than it should be and the Ministry has fewer resources available with which to address other service priorities. The unnecessarily large clientele has meant that the MOH also has relatively fewer resources available per patient, resulting in a compromise in the quality of care patients receive. One of the ways this has been manifested is in the high proportion of patients who have been directed to purchase medicines and other ancillary goods and services from other, off-site sources.

## Recommendations

It is recommended that the MOH do the following:

- Undertake a publicity campaign to improve the general public's awareness and understanding of the MOH's policy of providing priority services free of charge

- Increase user fee levels in order to increase revenue generation and cost recovery and to provide greater incentives for Hondurans who have the ability to pay to self-select out of MOH services

- Restructure user fees levels so that they cascade in a more pronounced fashion from the relatively higher levels at the higher tiered, more costly to operate facilities to the lower tiered, less costly to operate facilities (i.e., from national hospitals to regional hospitals to area hospitals to CESAMOs to CESARs) to encourage the more efficient use of the MOH's pyramidal referral system

- Develop, publicize, and train MOH personnel in the application of a screening device for identifying the poor and exempting them from payment

- Convoke a working group comprised of persons from all levels of the MOH (local, regional, and central), from the association of municipal governments (*Asociación de Municipios de Honduras*), the Ministry of Finance, the agency in charge of overseeing the Government of Honduras' international debt relief program (*Unidad de Apoyo Técnico*), and representatives of agencies with experience in identifying the poor (e.g., *Programa de Asignación Familiar*, or Benefits Program for Needy Families, and and *Fondo de Inversión Social*, Social Investment Fund), to work on reforming the user fee system[1]

- Make user fee reform part of a larger reform involving the MOH's more general resource allocation process.

[1] A more detailed, substantive, and procedural proposal for reforming the user fee system is presented in a companion piece, "An Assessment of the Ambulatory Care User Fee Systems in Ministry of Health Facilities in Honduras" (Fiedler, et al., PHR, November 2000). The recommendations presented here should be integrated into the earlier document's more comprehensive reform agenda and process.

# 1. Introduction

## 1.1 Purpose of the Study

User fees have existed in some Ministry of Health (MOH) hospitals since shortly after the founding of the Ministry in the early 1950s. In 1989, the MOH sought to bring some order to the patchwork of idiosyncratic, facility-specific systems that had developed up until that time by issuing the Regulation and Manual for Recovered Funds. The implementation of this regulation has never been assessed, and there is no information routinely available about the degree of concurrence between the law and the existing user fee systems. A growing general awareness of several shortcomings of these systems and the general recognition that there is little systematic information or knowledge about these systems spawned interest in undertaking this study.

"An Assessment of the Ambulatory Care User Fee Systems in Ministry of Health Facilities of Honduras," a previous study conducted by Partnerships for Health Reform (PHR) in November 2000, looked primarily at the established fee levels and administration of these systems. This study is intended to take a closer look at the outcome of the application of user fees from the consumer's perspective, investigating what fees are actually charged, where, and for what. The purpose of this study is to provide a sound, empirically based understanding of the health care market in Honduras, with special emphasis on health care-seeking behavior and the level of access to and utilization of care, the role of the MOH in the health care market of Honduras, fee levels and patient expenditures, and equity in the access to and use of care. This information will be combined with findings from the user fee study PHR conducted in 2000 to develop proposals for reforming the MOH's user fee system. The results will also be used to inform the development of a resource allocation tool, which the Ministry will use to allocate its budget to the nine health regions according to national goals and objectives.

## 1.2 The National Household Income and Expenditures Survey

The National Household Income and Expenditures Survey (*Encuesta Nacional de Ingresos y Gastos de los Hogares*, or ENIGH) was conducted by the General Directorate of Statistics and Census together with the Central Bank of Honduras. The major motivating force for the survey was to provide data with which to update the Central Bank's consumer and wholesale prices indices. Work on the survey began in August 1996. Financial and technical assistance was provided by the United States Agency for International Development (USAID).

The sampling frame relied upon results of the Population and Housing Census of 1988. The survey was based on a two-stage stratified probability sample. The country was divided into four strata—metropolitan Tegucigalpa, San Pedro Sula, other urban areas, and all rural areas—and 840 census segments. The departments of Gracias a Dios and the Bay Islands were intentionally excluded because of their small populations and the need to economize on fieldwork costs. Fieldwork began in January 1998 and was scheduled to be completed by December 1998. However, it was interrupted by Hurricane Mitch in October, and the schedule had to be extended until February 1999 to complete the

work. The nonresponse rate was 10 percent, which was relatively low for this type of survey. The final sample consisted of 3,746 households, comprised of 19,218 persons.

The survey's stratified sample provides estimates that statistically represent each of the four strata: metropolitan Tegucigalpa, San Pedro Sula, other urban areas, and all rural areas. The Central Bank staff developed an expansion factor variable that, when applied to the individual interviewee responses, provided national level population estimates. The results reported in this study are the weighted responses. The weight-derived estimated population of Honduras in 1998 was 6,198,827.

The survey instrument contained a health module that consisted of 102 questions and is the basis for this report. The health module questionnaire consisted of distinct sets of questions about hospitalization, acute illness and treatment, chronic illness and treatment, self-medication for acute and chronic illness, and preventive care.

## 1.3 Organization of the Report

The next chapter analyzes the self-reported health status of Hondurans and their general health care-seeking behavior. The third chapter analyzes the types of care sought and utilization rates for the entire health care delivery system of Honduras and analyzes the market shares of each of the major care providers. Variations in the disease and illness mix and in the patient mix of different sources of care are investigated, with the aim of identifying the role of the MOH within the health care market. The fourth chapter discusses fee levels, the likelihood of patients paying for care, and total patient expenditures for health care. The fifth chapter investigates the equity of the MOH user fee system. The last chapter makes conclusions and offers recommendations to improve the MOH user fee system.

# 2. Health Status and Health Care-Seeking Behavior: A National Level Analysis

## 2.1 The Prevalence of Self-Reported Illness

The prevalence of illness is identified as the proportion of the population that reports that it is ill. Of the 6,198,827 people reported living in Honduras in 1998, 19 percent reported having had an illness in the 30-day period prior to being interviewed. This level of self-reported illness is significantly lower than has been found in other Latin American countries in similar types of surveys. As Table 1 indicates, the prevalence of self-reported illness found in five other countries is generally three to four times higher than the Honduran level.

**Table 1: Self-reported Illness Rates in Latin American Countries**

| Country | Year | Recall Period | Self-reported Ill as a Percent of Total Respondents | Standardized to a 2 Week Recall Period | Percent of Honduras' Level |
|---|---|---|---|---|---|
| Honduras | 1998 | 30 days | 19% | 9% | 100% |
| Nicaragua | 1995 | 30 days | 21% | 10% | 111% |
| Nicaragua | 1993 | 2 weeks | 25% | 54% | 596% |
| El Salvador | 1989 | 2 weeks | 53% | 53% | 589% |
| Dominican Republic* | 1987 | 2 weeks | 42% | 42% | 467% |
| Colombia | 1987 | 2 weeks | 41% | 41% | 456% |
| Peru | 1984 | 2 weeks | 36% | 36% | 400% |

Table 2 provides a detailed portrait of the composition of the sample and of the self-reported ill in Honduras, by socio-demographic and income group, as well as by market.

**Table 2: Self-reported Illness in the Past 30 Days:**
**The Composition of the Weighted Sample and of the Self-reported Ill**

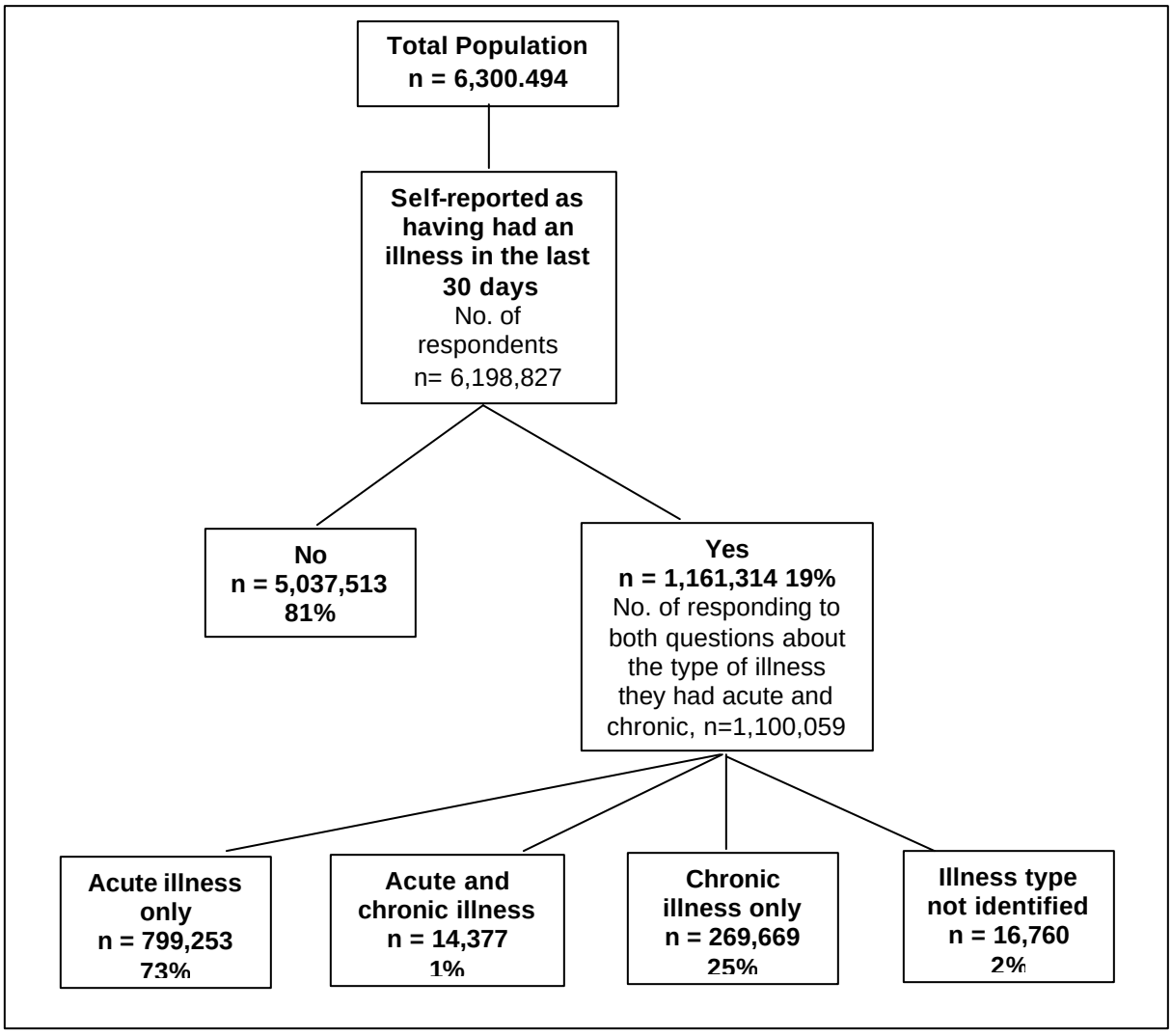
| Characteristics of the Population | The Entire Sample | | Number of Persons Responding | | Prevalence of Self-reported Illness | |
|---|---|---|---|---|---|---|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| Male | 3,083,426 | 49% | 3,038,893 | 99% | 489,291 | 16% |
| Female | 3,217,068 | 51% | 3,159,934 | 98% | 670,951 | 21% |
| **Age Groups** | | | | | | |
| Not indicated | 29,753 | | | | | |
| < 5 | 903,486 | 14% | 888,784 | 98% | 274,826 | 31% |
| 5-14 | 1,841,211 | 29% | 1,814,233 | 99% | 271,165 | 15% |
| 15-49 | 2,827,191 | 45% | 2,800,445 | 99% | 409,000 | 15% |
| 50-64 | 448,585 | 7% | 445,671 | 99% | 110,736 | 25% |
| 65+ | 250,269 | 4% | 249,693 | 100% | 94,515 | 38% |
| All | 6,300,495 | 100% | 6,198,826 | 98% | 1,160,242 | 19% |
| **Area of Residence** | | | | | | |
| Urban | 2,755,540 | 44% | 2,711,702 | 98% | 556,188 | 21% |
| Rural | 3.544,955 | 56% | 3,487,125 | 98% | 604,054 | 17% |
| All | 6,300,495 | 100% | 6,198,827 | 98% | 1,160,242 | 19% |
| **Education Level** (only persons > 5 years) | | | | | | |
| None | 1,040,132 | 20% | 1,030,209 | 99% | 199,180 | 19% |
| Primary | 3,170,028 | 61% | 3,116,550 | 98% | 495,535 | 16% |
| Secondary | 857,368 | 16% | 848,394 | 99% | 125,716 | 15% |
| High School | 140,354 | 3% | 139,044 | 99% | 25,812 | 19% |
| All | 5,207,882 | 100% | 5,134,197 | 99% | 846,243 | 16% |
| Literate | 4,047,813 | 78% | 3,986,875 | 98% | 630,878 | 16% |
| Illiterate | 1,160,069 | 22% | 1,147,321 | 99% | 215,364 | 19% |
| **Household Income** | | | | | | |
| First Quintile (poorest) | 1,254,869 | 20% | 1,218,848 | 97% | 227,923 | 19% |
| Second Quintile | 1,261,936 | 20% | 1,250,307 | 99% | 231,814 | 19% |
| Third Quintile | 1,249,573 | 20% | 1,231,235 | 99% | 228,062 | 19% |
| Fourth Quintile | 1,265,239 | 20% | 1,250,735 | 99% | 241,552 | 19% |
| Fifth Quintile (richest) | 1,258,248 | 20% | 1,238,273 | 98% | 229,214 | 19% |
| **Market/Stata** | | | | | | |
| Tegucigalpa Metro | 823,962 | 13% | 807,304 | 98% | 149,859 | 19% |
| San Pedro Sula | 557,694 | 9% | 549,797 | 99% | 137,784 | 25% |
| Other Urban Areas | 1,373,894 | 22% | 1,354,600 | 99% | 268,545 | 20% |
| Rural Areas | 3,544,955 | 56% | 3,487,125 | 98% | 604,054 | 17% |
| **Total** | 6,300,495 | 100% | 6,198,827 | 98% | 1,161,314 | 19% |

Whereas the denizens of San Pedro Sula (SPS) constitute 9 percent of the weighted sample, they account for 12 percent of sick Hondurans and have a prevalence of illness rate of 25 percent. No difference was found in prevalence rates among the five household income quintiles. The prevalence rate of each of the five household income quintiles is 19 percent.

Persons who reported that they had some type of health problem in the previous 30 days were asked if the problems were considered acute illnesses or chronic ailments. No guidance was given to the respondents in distinguishing between these two categories.

As Figure 1 shows, of those reporting they were ill, 73 percent said they had an acute illness, 25 percent had a chronic ailment, 1 percent had both an acute and a chronic problem, and the remaining 2 percent did not identify the type of illness.

**Figure 1: Self-reported Health Status: The Prevalence of Self-reported Illness by Type of Illness**



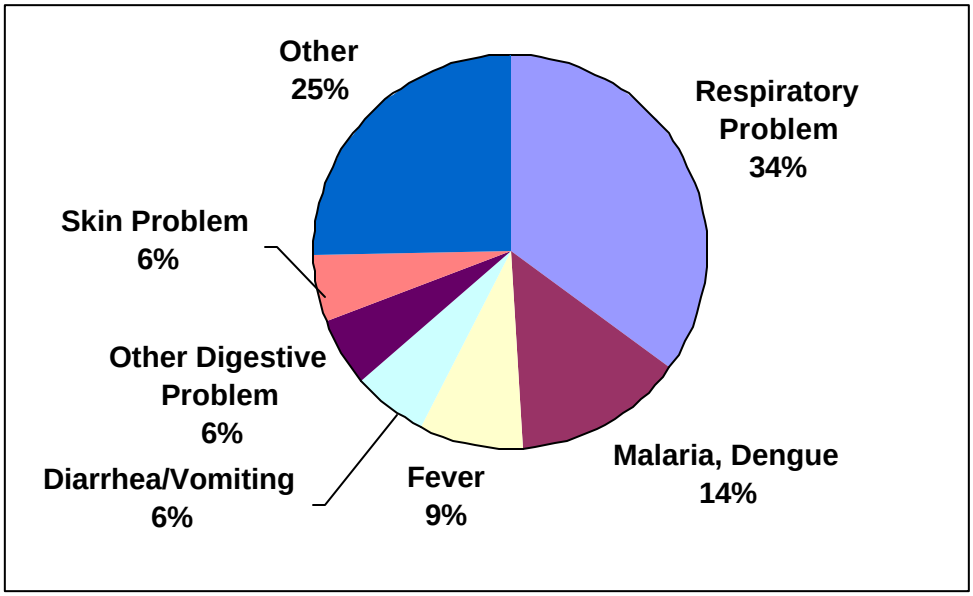
### 2.1.1 Acute Illness Types

Persons who reported having an acute health problem were asked what type of problem they had. The interview form offered 28 precoded responses of types of illnesses or symptoms. Persons who had more than one acute problem in the 30-day recall period were asked to identify only the one they had most recently.

Figure 2 shows the most common acute health problems identified. Respiratory problems were by far the most commonly reported acute illness, accounting for 35 percent of all responses. The next most common category was malaria and dengue, which accounted for 14 percent of the total. These two acute illness types together represent half of all reported acute health problems. Only four of the remaining 26 categories of acute illness identified in the questionnaire accounted for at least 5 percent of the total.

**Figure 2: Most Common Acute Health Problems Self-reported in the Past 30 Days**

(n = 468,255)




### 2.1.2 Chronic Illness Types

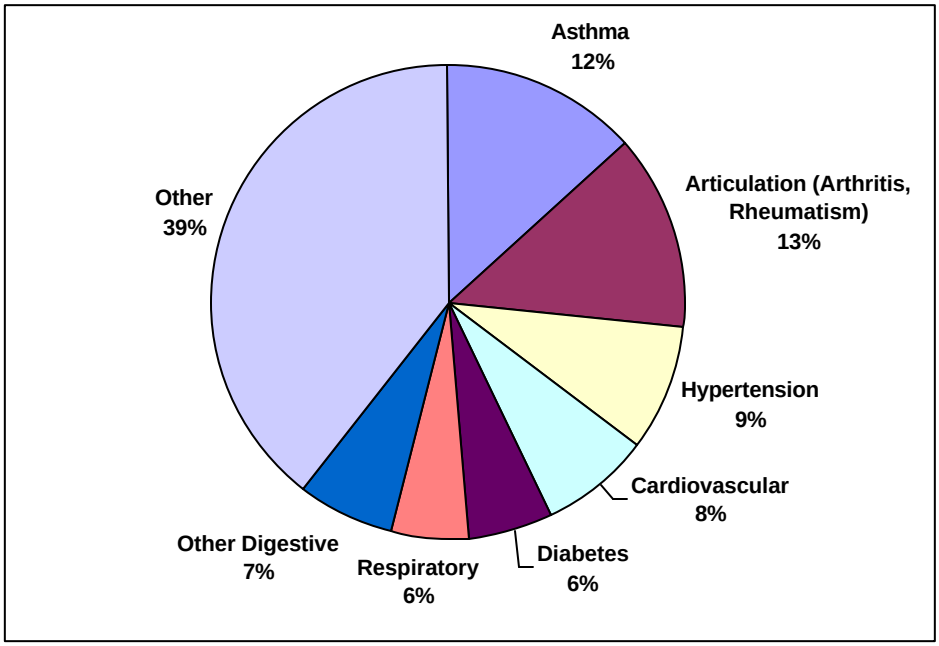
The chronic illness questions paralleled those of acute illness. Individuals who reported having a chronic health problem in the past 30 days were asked what the problem was, and those who had more than one illness were asked to identify only the most recent one. The same list of 28 precoded illness types was used to classify ailments.

Figure 3 shows the distribution of chronic health problems reported. No one chronic condition was markedly more prevalent. The most common problems were asthma and problems of articulation (or joints, such as arthritis or rheumatism), accounting for 12 percent and 13 percent, respectively, of all health problems. Whereas the two most common acute conditions constituted 50 percent of all

acute problems, the two most frequently reported chronic ailments (articulation and asthma) accounted for only 27 percent, about half that proportion.

**Figure 3: Self-reported Chronic Problems**

(n = 299,645)



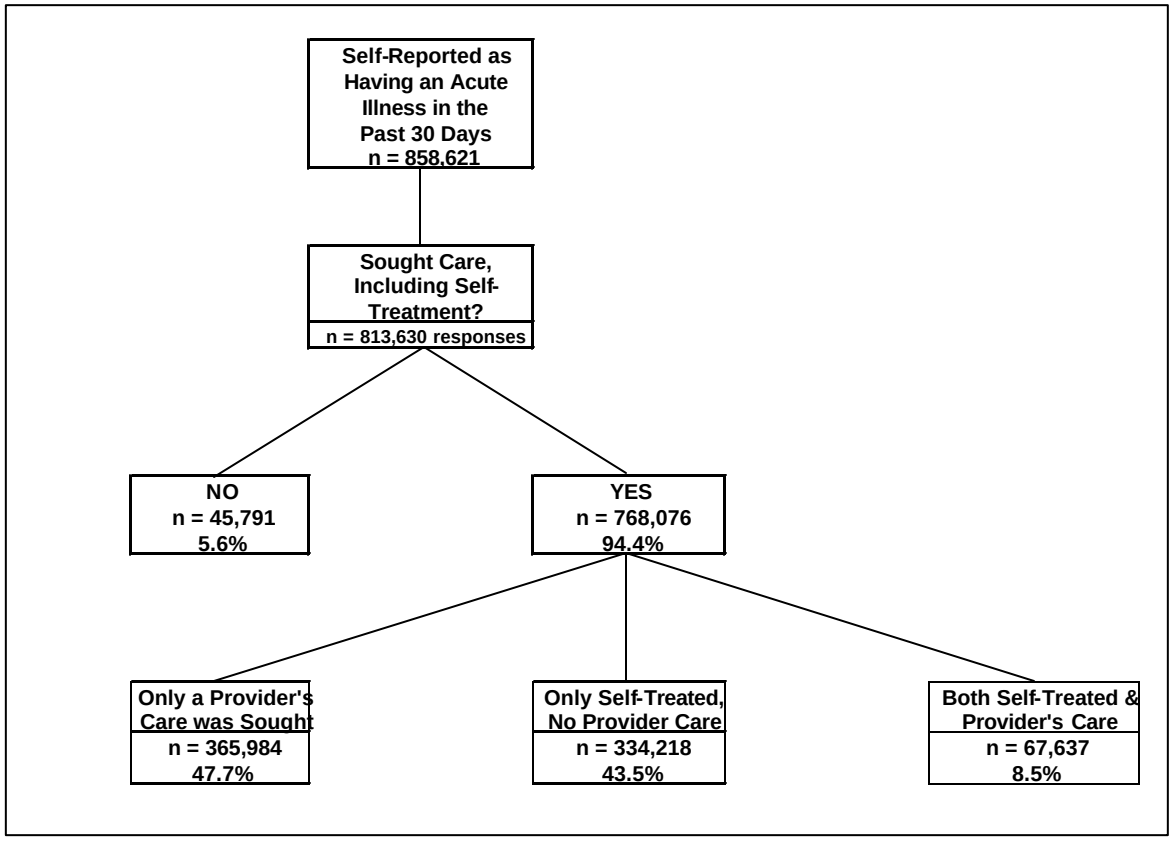

## 2.2 Responses to Illness: Self-Treatment and Care-Seeking Behavior[2]

Figure 4 shows what action persons who reported they had an acute illness took, if any. A total of 56 percent of persons with an acute health problem sought care. More specifically, 47.7 percent sought care from a provider and another 8.5 percent both self-treated and sought care, while the remaining 43 percent only self-treated their illnesses. On average, those who sought acute care reported having 1.3 visits during the 30-day recall period.

Figure 5 shows the frequencies for the same types of responses for persons who had a chronic problem. The analysis shows that of those persons who had a chronic ailment, 67.7 percent sought care from a provider, 20.8 percent self-treated, and 11.6 percent did both. On average, persons who obtained care for their chronic health problem had 2.1 consultations in a three-month period.

[2] There was a sizeable number of persons who reported they were ill, but either did not answer the questions specifying whether they had a chronic or an acute condition or did not answer the question about whether they had self-treated their illness. As a result, the number of observations in the analysis of this section is less than it is in the health status discussion or in the formal provider discussion

**Figure 4: Care Seeking Behavior: Persons with a Self-reported Acute Illness, by Self-treating and Care Seeking Behavior**




Compared with persons who had an acute sickness, persons with a chronic ailment were much more likely to have sought care rather than have self-treated. Of those persons reporting having chronic illnesses, 79 percent sought care from a provider, compared to 56 percent among individuals with acute illnesses. Of those persons who experienced a chronic ailment, 77 percent sought care. Persons who obtained care for their chronic health problem, on average, had 2.1 consultations in a three-month period.

With the prevalence of acute illness nearly three times greater than that of chronic illness, the majority of curative ambulatory care provided in the Honduran health care system is for acute illness. Acute care visits totaled roughly 625,000 in the 30-day recall period, while chronic care visits numbered about 480,000 in the three-month period prior to the survey. Extrapolating these figures, it is estimated that the total curative care provided in Honduras in a year is 9.5 million visits, of which 80 percent is for treating acute health problems. The average number of curative care visits per person in Honduras is 1.5. Figure 6 compares this rate with those of the neighboring countries of Nicaragua and El Salvador.

**Figure 5: Care Seeking Behavior: Persons with a Self-reported Chronic Illness, by Self-treating and Care Seeking Behavior**

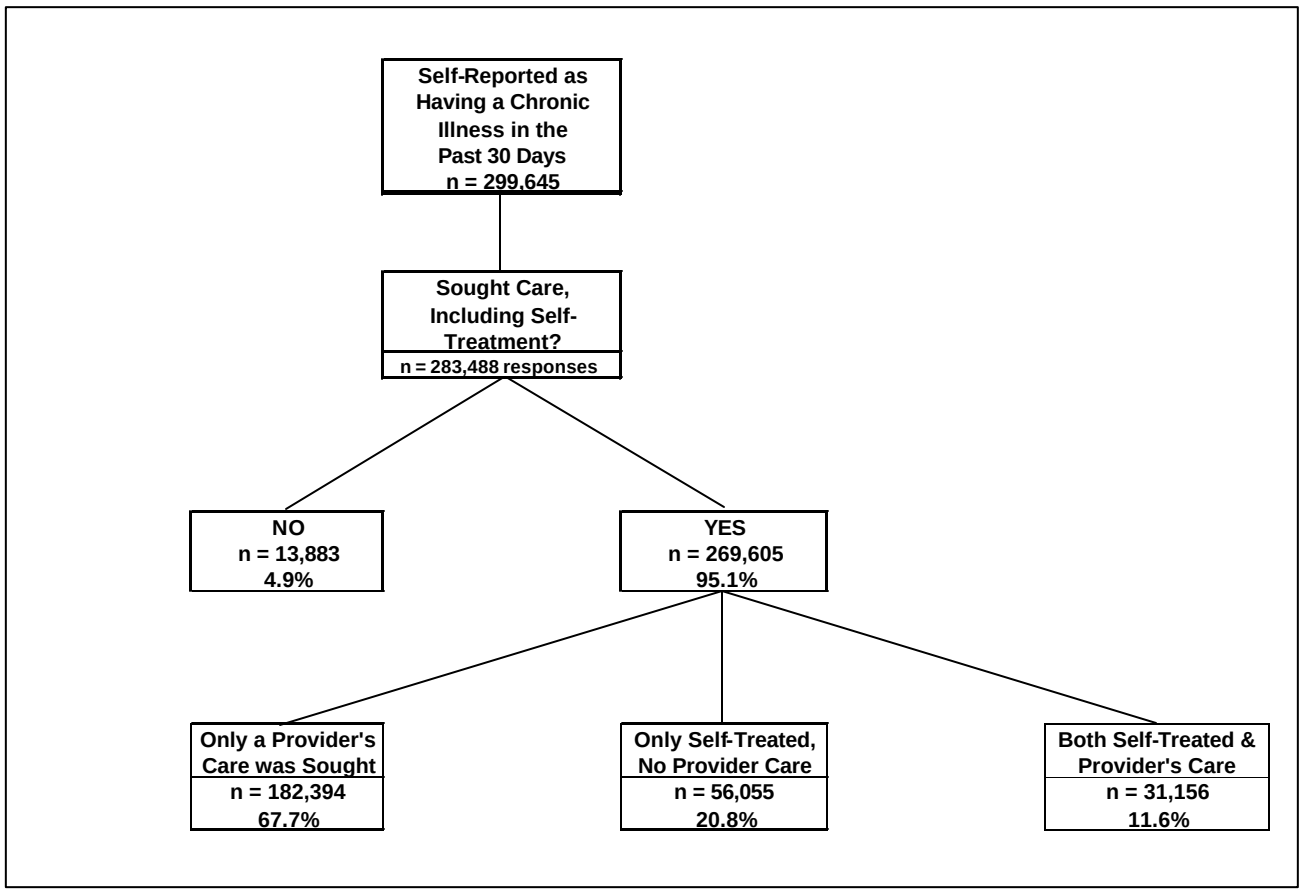
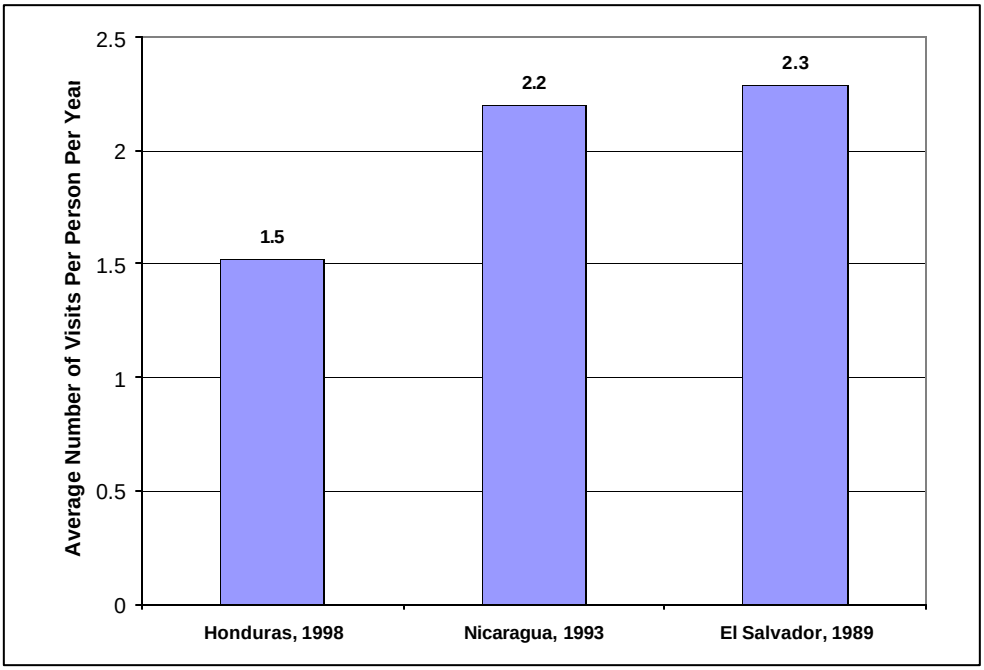



**Figure 6: Comparing National Curative Consultation Rates**



## 2.3 Preventive Care

Table 3 presents the distribution of preventive care visits by type of care. As the table indicates, nearly 700,000 Hondurans (11 percent) had a preventive visit in the three-month period prior to their being interviewed. The majority of preventive visits were for immunization (83.3 percent). It may be inferred from these data that the coverage of child growth and development (growth monitoring) and family planning are very low. Growth and development visits averaged 1 percent. This suggests that the coverage of child growth monitoring services is no more than 5 percent of the children under the age of five. Only 1,900 persons had one or more family planning consultations.

**Table 3: Types of Preventive Care Sought in the Past Three Months**

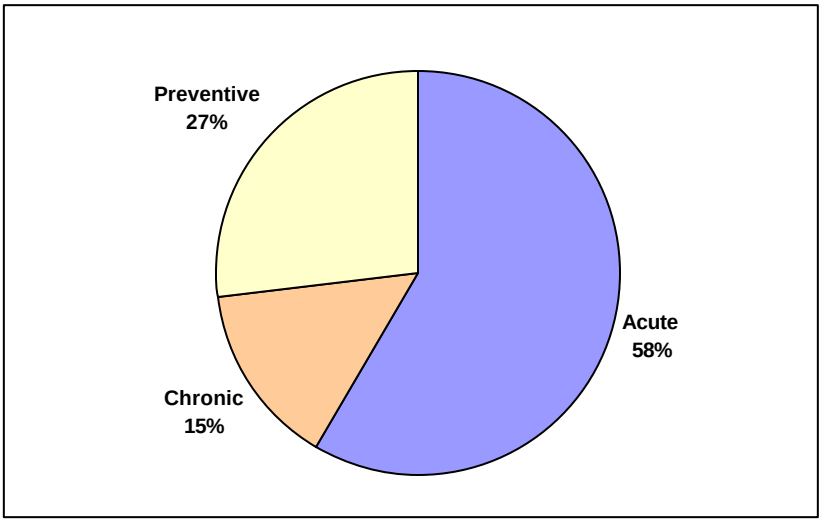
| Type of Care | Patients | | Visits | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Vaccination | 609,150 | 87.2% | 732,235 | 83.3% |
| Routine Medical Examination | 25,357 | 3.6% | 37,578 | 4.3% |
| Prenatal Care | 21,855 | 3.1% | 45,991 | 5.2% |
| Other | 20,366 | 2.9% | 29,956 | 3.4% |
| Growth and Development | 8,865 | 1.3% | 12,072 | 1.4% |
| Postpartum Care | 8,737 | 1.3% | 10,168 | 1.2% |
| Dental Examination | 2,347 | 0.3% | 2,347 | 0.3% |
| Family Planning | 1,865 | 0.3% | 9,053 | 1.0% |
| **Total** | **698,542** | **100.0%** | **879,400** | **100.0%** |

## 2.4 Annual Average Number of Visits per Honduran and the Composition of Ambulatory Care

According to the World Health Organization (WHO), the minimum acceptable care consultation rate for a country is 2.0; i.e., on average, each person should have at least two consultations annually.

Figure 7 shows the annual composition of outpatient care provided by all sources. Annualizing the preventive care consultations and combining them with curative care visits provides an estimate of the total number—13 million—of ambulatory visits provided in Honduras. Thus the consultation rate in Honduras is 2.1, slightly above the WHO standard. The composition of the 13 million visits is presented in Figure 7.

**Figure 7: Annual Composition of Outpatient Care Provided in Honduras, All Sources, 1998**




## 2.5 Market Shares of Ambulatory Care

Three indicators are used to describe the relative importance of different agents in a health care market: the proportion of patients, the proportion of consultations, and the proportion of total expenditures. Although expenditure (i.e., cost) data are not available, the survey asked a series of questions about the fees paid for care. That data will be analyzed in Chapter 4.

### 2.5.1 Market Shares of Ambulatory Care Patients

Table 4 shows where patients obtained their ambulatory care in the past three months by type of provider. As the table indicates, the public sector is preferred for outpatient care far more than the private sector, with 70 percent of patients seeking care in public facilities and 33 percent seeking care in private facilities. In the public sector, the majority of patients visited CESARs (29 percent) and CESAMOS (27 percent) clinics. "Private physicians, private clinics" had the next largest market share with 22 percent. Contrary to the conventional wisdom, nongovernmental organization (NGO) clinics are a minor actor in the national health arena of Honduras. They treated only 1 percent of all persons seeking ambulatory care.[3]

[3] It may be that NGO patients are under-reported, and this can be due to interviewees erroneously identifying an NGO provider as a private physician/private clinic.

**Table 4: Where the Ill Sought Ambulatory Care in the Past Three Months and Concentration Rates by Source of Care**

| | Total | | Total Visits | Concentration Rate: Average Number of Visits per Person |
|---|---|---|---|---|
| | Number | Percent | | |
| **Public** | | | | |
| CESAR | 347,995 | 29% | 592,373 | 1.7 |
| CESAMO | 329,695 | 27% | 552,458 | 1.7 |
| MOH Regional Hospital | 62,129 | 5% | 102,347 | 1.6 |
| MOH National Hospital | 67,892 | 6% | 107,423 | 1.6 |
| MOH Area Hospital | 17,976 | 1% | 28,471 | 1.6 |
| Community Volunteer | 40,905 | 3% | 57,817 | 1.4 |
| Medicine Post | 501 | 0% | 787 | 1.6 |
| **MOH Total** | **817,916** | **67%** | **1,441,676** | **1.6** |
| IHSS | 39,080 | 3% | 79,706 | 2.0 |
| **Public Total** | **854,365** | **70%** | **1,521,382** | **1.8** |
| **Private** | | | | |
| Private Physician, Clinic | 270,396 | 22% | 600,521 | 2.2 |
| Private Hospital | 33,380 | 3% | 70,798 | 2.1 |
| Private Dentist | 5,891 | 0% | 13,057 | 2.2 |
| Pharmacy | 1,601 | 0% | 4,702 | 2.9 |
| Traditional Healer | 5,166 | 0% | 7,945 | 1.5 |
| **Private, Non-commercial Total** | **91,168** | **7%** | **126,283** | **1.4** |
| **Private Total** | **402,901** | **33%** | **823,306** | **2.0** |
| **Total** | **1,214,281** | **100%** | **2,344,688** | **1.9** |

The percentages of the aggregated levels are less than the sum of their individual component parts because some individuals have more than one source of care. In the aggregated measures (such as the MOH total or the private, commercial total) these persons are counted only once, regardless of the number of different providers within this aggregated measure that they visited.

Figure 8 shows the market shares of individual sources of acute ambulatory care and Figure 9 shows the public-private split of the market. The public sector is more than twice as large as the private sector; 66 percent of patients visited public facilities exclusively, compared to 30 percent who visited private facilities exclusively. Four percent of patients used both a public and private provider.

**Figure 8: Sources of Outpatient Care for Acute Health Problems in the Past 30 Days**

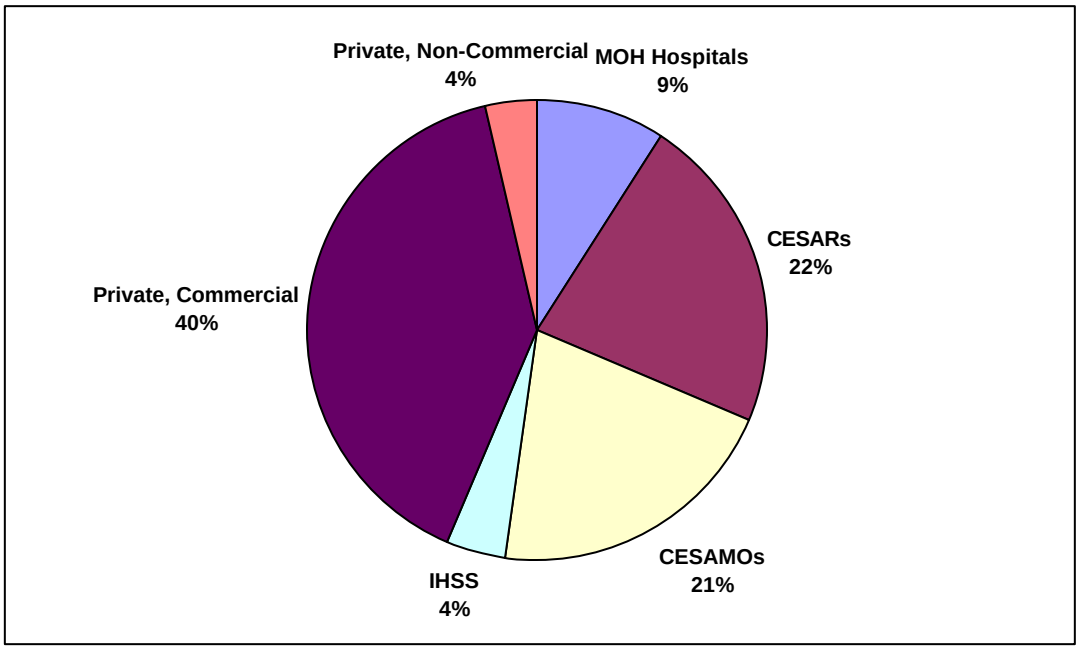
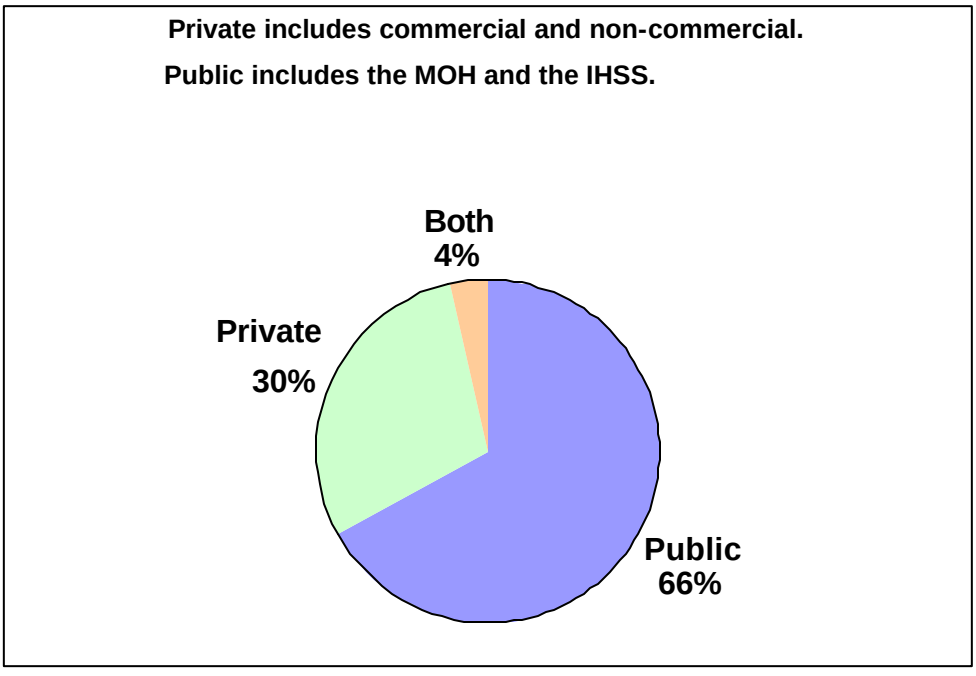



**Figure 9: Public versus Private Market Shares of Ambulatory Care Patients**



### 2.5.2 Market Shares of Ambulatory Care Consultations

Table 5 shows the distribution of ambulatory visits by type of visit and type of provider. The largest share is that of "private physicians, clinics" (26 percent). Following closely behind are the CESARs and CESAMOs with 25 percent each. NGO clinics account for only 1 percent of all care.

**Table 5: Sources of Ambulatory Health Care Visits Provided in the Past Three Months***

| | Acute | Chronic | Preventive | Total Visits | |
|---|---|---|---|---|---|
| | | | | Number | Percent |
| **Public Sector** | | | | | |
| CESAR | 314,137 | 31,477 | 246,759 | 592,373 | 25% |
| CESAMO | 291,781 | 20,524 | 240,153 | 552,458 | 24% |
| MOH Regional Hospital | 58,084 | 20,168 | 24,095 | 102,347 | 4% |
| MOH National Hospital | 53,728 | 30,044 | 23,651 | 107,423 | 5% |
| MOH Area Hospital | 15,041 | 2,744 | 10,686 | 28,471 | 1% |
| Community Volunteer | 25,194 | 2,041 | 30,582 | 57,817 | 2% |
| Medicine Post | 426 | 83 | 278 | 787 | 0% |
| **MOH** | **758,391** | **107,081** | **576,204** | **1,441,676** | **61%** |
| IHSS Hospital | 41,330 | 8,163 | 7,084 | 56,577 | 2% |
| IHSS Clinic | 15,345 | 2,287 | 5,497 | 23,129 | 1% |
| **IHSS** | **56,675** | **10,450** | **12,581** | **79,706** | **3%** |
| **Subtotal, Public Sector** | **815,066** | **117,531** | **588,785** | **1,521,382** | **65%** |
| **Private Sector** | | | | | |
| Private Physician | 485,538 | 87,117 | 27,866 | 600,521 | 26% |
| Private Hospital | 53,476 | 8,533 | 8,789 | 70,798 | 3% |
| Private Dentist | 10,676 | 1,058 | 1,323 | 13,057 | 1% |
| Pharmacy | 4,620 | - | 82 | 4,702 | 0% |
| Traditional Healer | 4,140 | 3,805 | 0 | 7,945 | 0% |
| **Private, Commercial** | **558,450** | **100,513** | **38,060** | **697,023** | **30%** |
| NGO Clinic | 18,064 | 453 | 1,092 | 19,609 | 1% |
| Other | 22,636 | 5,886 | 61,561 | 90,083 | 4% |
| Friend, Relative | 11,330 | 4,224 | 1,036 | 16,590 | 1% |
| **Subtotal, Private, Non-commercial** | **52,031** | **10,563** | **63,689** | **126,283** | **5%** |
| **Private Sector** | **610,481** | **111,076** | **101,749** | **823,306** | **35%** |
| **Total** | **1,425,547** | **228,607** | **690,534** | **2,344,688** | **100%** |
| | **60.8%** | **9.7%** | **29.5%** | **100%** | |

* The 30 day recall period for acute visits was extrapolated to make it comparable to the three month recall of chronic and preventive care.

As shown in Figure 10, the 28 MOH hospitals together produce one-tenth of all outpatient visits. Adding outpatient visits made to CESARs and CESAMOs, the MOH provides 59 percent of all outpatient care, the Honduran Social Security Institute (*Instituto Hondureño de Seguro Social*, IHSS) provides an additional 3 percent, and the private sector provides 35 percent. The private sector percent is dominated by the commercial sector, while the noncommercial sector account for only 14 percent of the private sector total.

A comparison of the patients- and visits-based definitions of market share shows that the MOH's market share of patients is larger than its share of visits. This reflects the fact that persons who are treated by the MOH have fewer visits on average.

**Figure 10: Market Shares of Total Ambulatory Care**
(Includes Acute and Chronic Care and Preventive Care Visits)

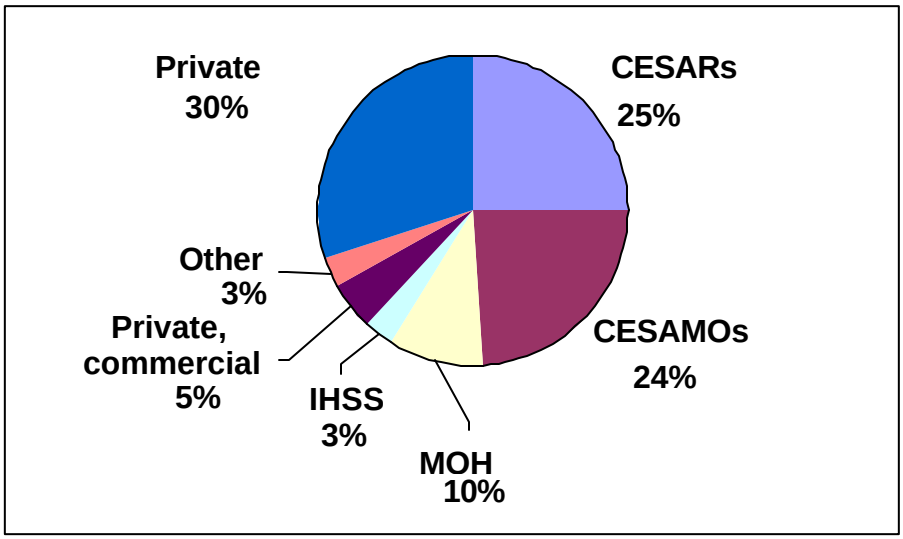
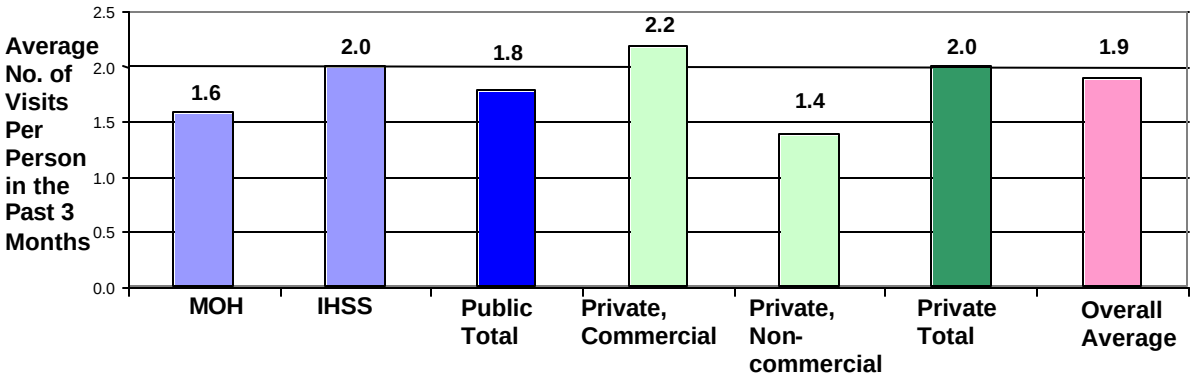



Figure 11 shows the concentration rates of the key providers or subsectors of the market. On average, individuals have 1.9 visits per year. This ranges from a high of 2.2 visits in the private sector to 1.6 visits for the MOH.

**Figure 11: The Concentration of Ambulatory Care Services by Subsector**

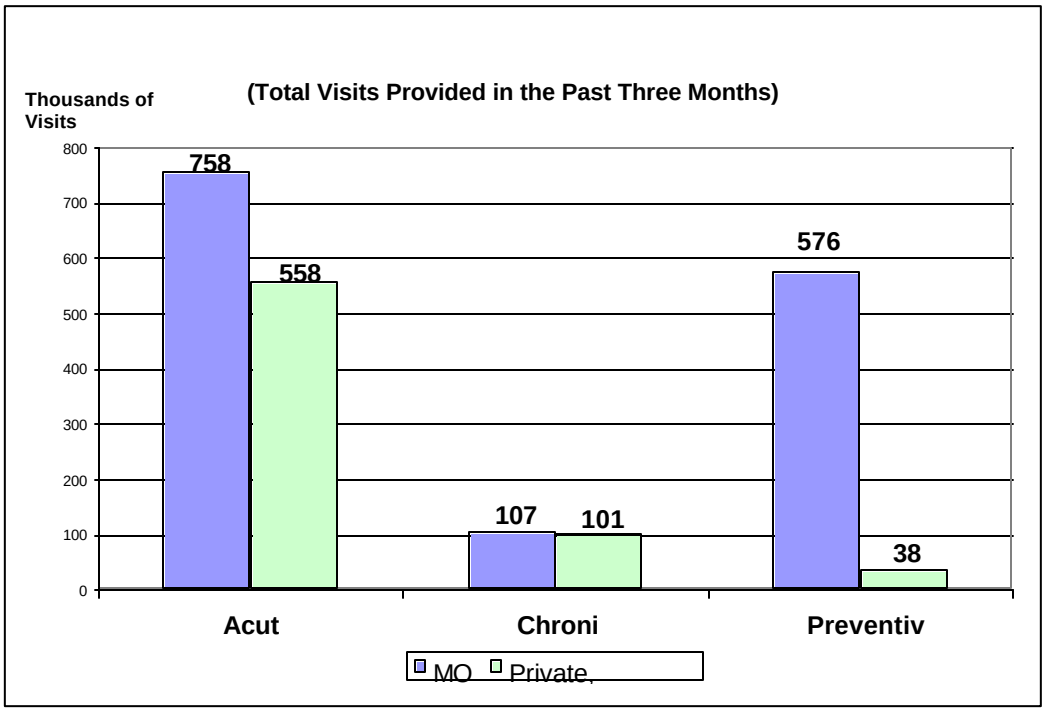
**(The Average Number of Visits per Person with at Least One in the past three months)**



## 2.6 Variations in Ambulatory Case Mix by Sources of Care

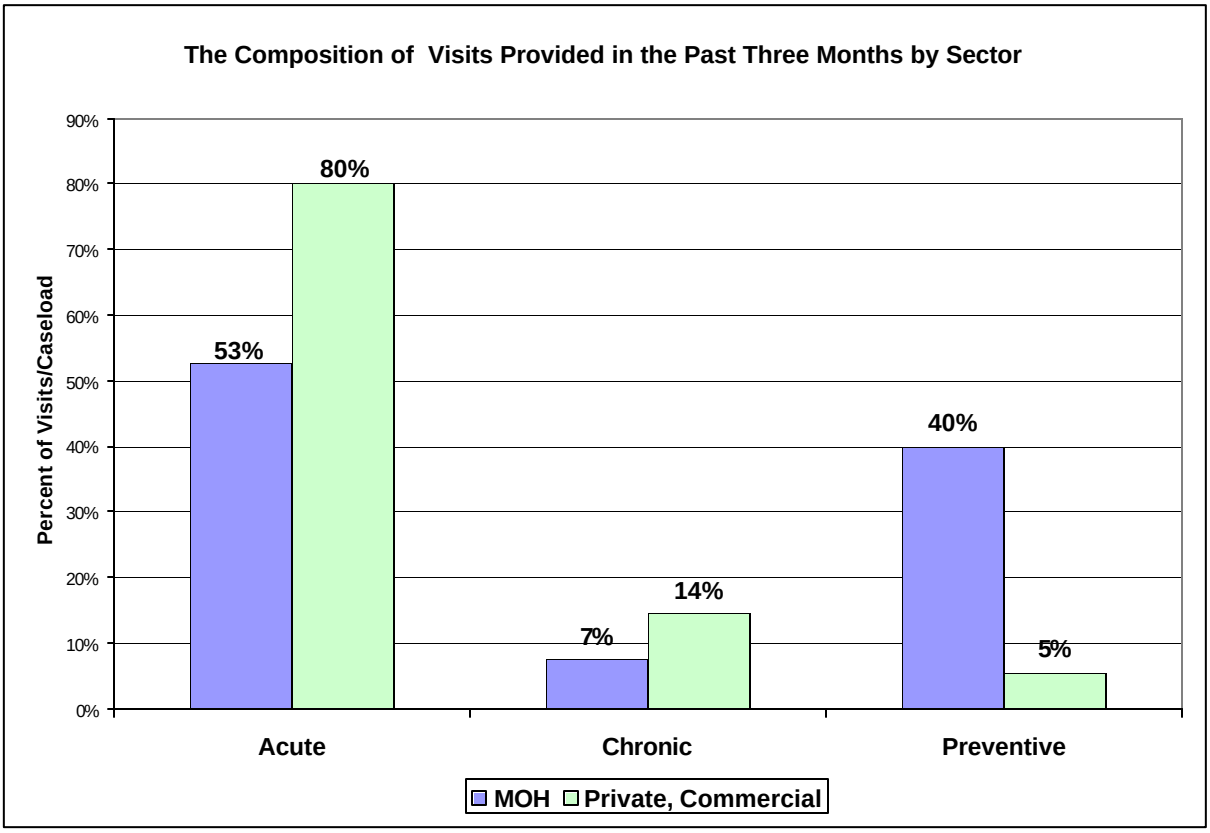
Figure 12 shows the differences in the case mixes of the two most important components of the market—the MOH and the private, commercial subsectors. As the figure shows, the composition of the public and private sectors is markedly different. In both subsectors, acute care accounts for the majority of visits. However, the private, commercial sector's caseload is overwhelmingly acute care, which accounts for 80 percent of this sector's visits. The private, commercial sector provides nearly the same amount of chronic care that the Ministry does. Whereas, the private, commercial sector provides 29 percent of the care that the MOH does, it accounts for about 49 percent of all of the chronic care and 42 percent of the acute care provided by these two subsectors.

**Figure 12: Comparing the MOH and Private, Commercial Sectors' Case Mixes**




The MOH's case mix is more balanced, as may be seen in Figure 13.

**Figure 13: Comparing the MOH and Private, Commercial Sectors' Case Mixes**

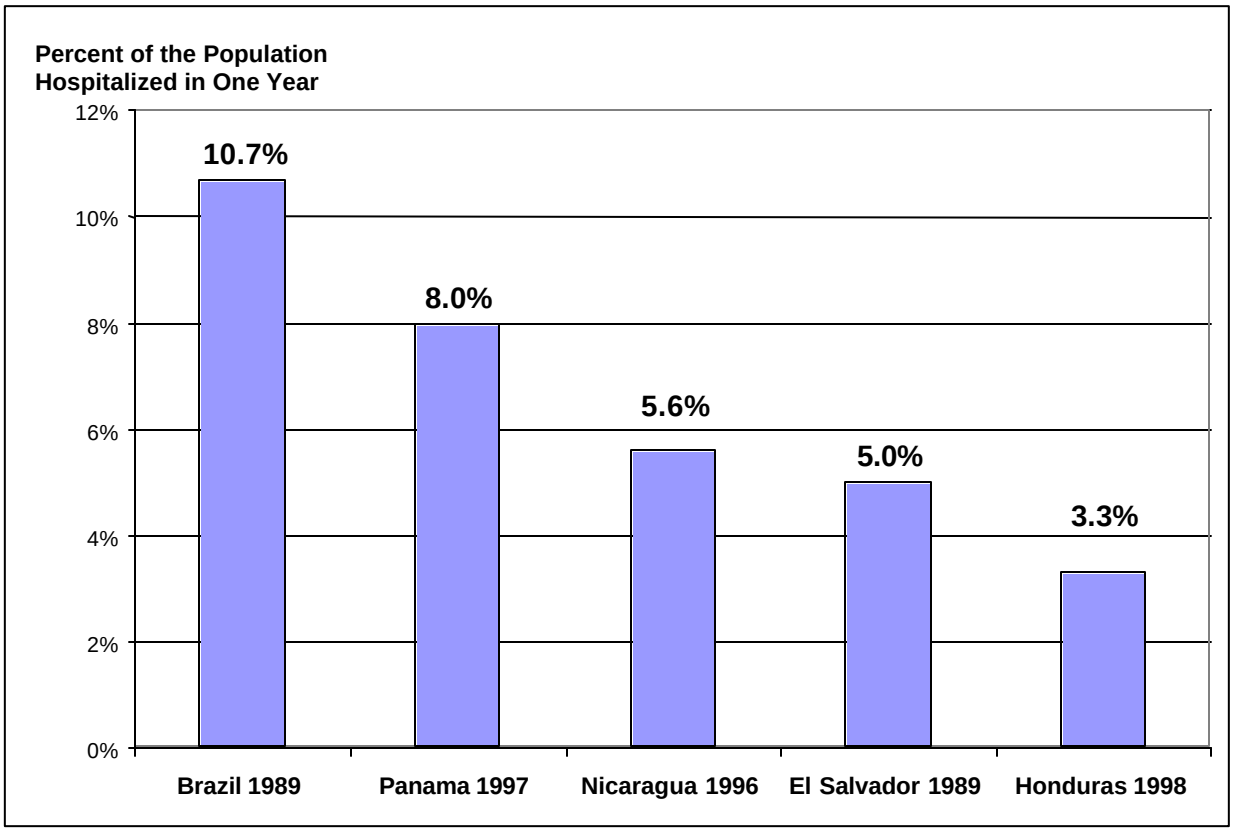



The biggest difference in the case mix of the two subsectors is the paucity of preventive care provided by the private, commercial sector. The MOH provides 94 percent of the preventive care provided by these two subsectors—more than 15 times the number of visits provided by the private, commercial sector.

## 2.7 Hospitalization

Nearly 210,000 Hondurans were hospitalized at least once in the 12-month period prior to the survey. The hospital coverage rate of 3.3 percent of the population is well below the usual 5 to 10 percent level of most Latin American countries, as may be seen in Figure 14.

**Figure 14: Comparing Hospitalization Rates in Latin America**




Even El Salvador and Nicaragua, which have relatively low hospitalization rates by international standards, have hospitalization rates that are more than 50 percent greater than those of Honduras (Gómez 1990: 64; David, et al., 1996:40).

The mean length of stay in a hospital is 5.8 days, nearly double the median of 3 days. This reveals the highly skewed underlying distribution, as shown in Table 6.

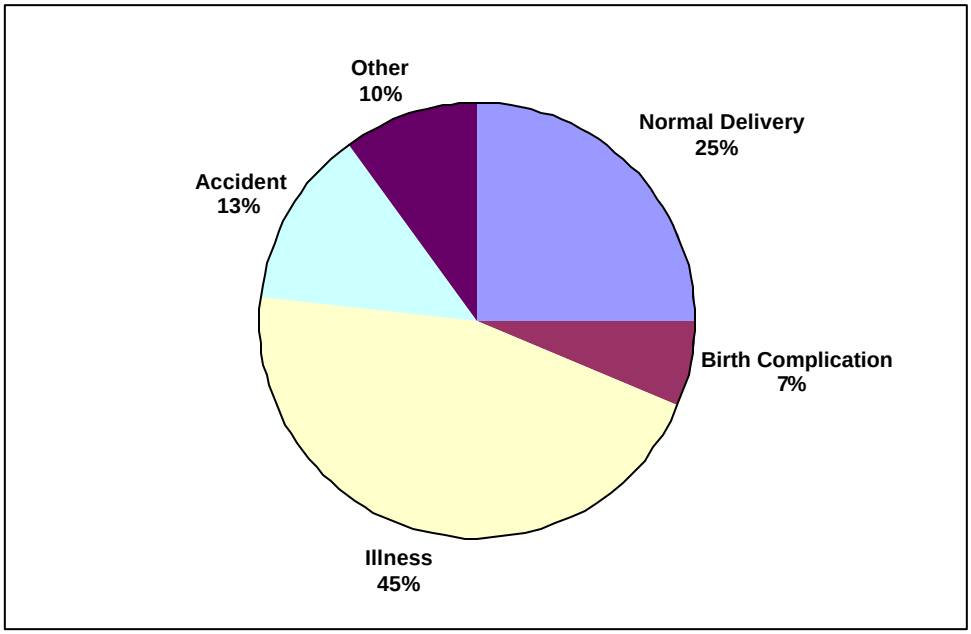
**Table 6: Number of Days Hospitalized in the Past 12 Months**

| Number of Days | Number of Persons | Percent of Persons | Cumulative Percent |
|---|---|---|---|
| 0 | 2,187 | 1% | 1% |
| 1 | 42,316 | 20% | 21% |
| 2-3 | 76,908 | 37% | 58% |
| 4-5 | 28,598 | 14% | 71% |
| 6-10 | 33,879 | 16% | 88% |
| 11-20 | 16,378 | 8% | 95% |
| 21+ | 9,537 | 5% | 100% |
| **Total** | **209,803** | **100%** | |

Mean number of days: 5.8
Median number of days: 3.0
Total number of days: 1,220,549

Nearly 60 percent of persons admitted to a hospital stayed three days or less. In contrast, 5 percent of persons admitted had stays of more than 20 days, and this accounted for nearly 20 percent of all patient days. In part, the large number of short stays reflects the hospitals' case mix, as shown in Figure 15. One-quarter of admissions were for normal delivery.

**Figure 15: Hospital Admissions by Condition**




### 2.7.1 Sources of Hospitalization

Table 7 shows the number and percentage of persons hospitalized by type of hospital. Of those persons who were hospitalized in the previous year, 71 percent were treated in an MOH hospital, compared to 19 percent in the private sector and 7 percent in IHSS.

**Table 7: Hospital Admissions in the Past 12 Months**

| Type of Hospital | Persons | | Admissions | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| MOH National Hospital | 64,155 | 31% | 67,754 | 29% |
| MOH Regional Hospital | 68,538 | 33% | 81,603 | 35% |
| MOH Area Hospital | 17,111 | 8% | 18,214 | 8% |
| **All MOH Hospitals** | **149,804** | **71%** | **167,571** | **71%** |
| IHSS | 14,570 | 7% | 17,119 | 7% |
| Private | 40,623 | 19% | 46,675 | 20% |
| Armed Forces | 1,383 | 1% | 1,506 | 1% |
| Other | 3,422 | 2% | 3,422 | 1% |
| **Total** | **209,802** | **100%** | **236,293** | **100%** |

As is usually the case in countries where there is a low-priced or free public health care system combined with a social security system that has mandated participation and that has its own health care delivery system, the private hospital sector is relatively less developed than the private ambulatory care market. In such countries, the private sector in general, and particularly the more costly and higher priced private hospital sector, are crowded out of these markets. The vast majority of would-be private patients are already paying social security for health insurance coverage and few are willing and able to purchase additional insurance or to pay out of pocket for expensive hospital care. Whereas the private, commercial sector's outpatient care market share is 25 percent, its hospital market share is only 19 percent. The fact that the private hospital share is as large as it is and the private sector's hospital and ambulatory care shares are as similar as they are is due to both the low cost and the low coverage of IHSS. IHSS has only 4 percent of the ambulatory care market and 7 percent of the hospital market.

# 3. The Honduran Health Care Market and the Role of the Ministry of Health

Chapter 3 takes a closer look at the Honduran health care market, investigating variations in Hondurans' consultation, concentration, and coverage rates and the role played by different sources of care.

## 3.1 Variations in the Use of Ambulatory Care

Tables 8 and 9 show the coverage, consultation, and concentration rates for acute and chronic ambulatory care disaggregated by various characteristics of the population.[4] The discussion will focus more on the acute care rates, as acute care constitutes 80 percent of all curative care visits provided. The national annual acute consultation rate is 121 per 100 persons. That is, on average, each Honduran has 1.21 acute care visits each year. Similar to other countries, Honduran women have higher consultation rates (136 compared to 105 for men), as do very young (291) and very old (156) urban residents (148 compared to 101 for rural residents) and literate persons (includes those more than five-years old).

Survey results also show that the magnitude of household income and the consultation rate are not directly related in Honduras as they generally are in most countries. The only income quintile with a consultation rate that varies from the national average by more than 7 percent is the first quintile. Its rate is 20 percent less, suggesting that income may be an important constraint to this group's use of health care. As judged by the consultation rate, the clear priority of the health care system is children under five. The consultation rate for these children is nearly two-and-a-half times the national average.

Acute illness consultation rates of the four strata vary significantly, from SPS's high rate of 181, to the rural areas' subnational average of 101. San Pedro's rate is 50 percent above the national average and 80 percent greater than that of the rural areas. These very different rates reflect differences in both demand (e.g., income, or predisposition to using care) and supply (e.g., more available sources of care) that exist in these different strata, which may be thought of as different health care markets.

[4] These rates are commonly used as indicators of the performance of a health care system and as a way to assess variations in the use of care. The coverage rate is the number of persons who had at least one consultation in a particular time period divided by the total population. The consultation rate is the average number of consultations per person per time period. The concentration rate is the total number of consultations provided divided by the number of persons who had at least one consultation.

**Table 8: Coverage, Consultation, and Concentration Rates for Acute Illness Ambulatory Care**

| | Consultation Rate (Annualized) | Concentration Rate (Last 30 Days) | Coverage Rate (Last 30 Days) |
|---|---|---|---|
| | Avg. Number of Curative Care Visits per 100 Persons of: | | Proportion of the Total Population with At Least One Curative Care Visit |
| **Characteristic of the Population** | **The Entire Population** | **Persons with One or More Consultations** | |
| Male | 105.1 | 132.5 | 6.5% |
| Female | 136.6 | 134.8 | 8.3% |
| **Age Groups** | | | |
| < 5 | 291.1 | 132.9 | 18.0% |
| 5-14 | 98.7 | 128.5 | 6.3% |
| 15-49 | 85.6 | 136.5 | 5.2% |
| 50-64 | 83.4 | 128.9 | 5.3% |
| 65+ | 156.1 | 159.8 | 8.0% |
| **Education level** (only persons >5 years) | | | |
| None | 78.2 | 132.5 | 4.8% |
| Primary | 99.9 | 134.8 | 6.1% |
| Secondary | 76.9 | 132.5 | 4.8% |
| High School | 100.0 | 140.8 | 5.8% |
| Literate | 93.0 | 134.2 | 4.8% |
| Illiterate | 87.7 | 134.5 | 5.4% |
| **Household Income** | | | |
| First Quintile (poorest) | 101.3 | 131.7 | 6.3% |
| Second Quintile | 126.8 | 135.5 | 7.7% |
| Third Quintile | 129.5 | 134.6 | 7.9% |
| Fourth Quintile | 117.8 | 125.5 | 7.7% |
| Fifth Quintile (richest) | 128.4 | 140.3 | 7.5% |
| **Market** | | | |
| Tegucigalpa Metro Area | 128.5 | 128.6 | 8.2% |
| San Pedro Sula | 181.3 | 155.0 | 9.6% |
| Other Urban Areas | 145.3 | 140.1 | 8.5% |
| Rural Areas | 100.6 | 127.3 | 6.5% |
| Nation-wide | **121.1** | **133.8** | **7.4%** |

According to Table 8, the national acute care concentration rate is 134. This indicates that for every 100 persons who had at least one visit for an acute illness in the previous 30 days, there were a total of 134 visits. In other words, the average person had 1.34 visits. As may be seen in Table 8, there is little variation in the concentration rate by the various population characteristics of the population.

**Table 9: Coverage, Consultation, and Concentration Rates for Chronic Illness Ambulatory Care**

| | Consultation Rate (Annualized) | Concentration Rate (Last 3 Months) | Coverage Rate (Last 3 Months) |
|---|---|---|---|
| | Avg. Number of Curative Care Visits per 100 Persons of: | | Proportion of the Total Population with At Least One Curative Care Visit |
| **Characteristic of the Population** | **The Entire Population** | **Persons with One or More Consultations** | |
| Male | 23.6 | 211.1 | 2.8% |
| Female | 37.1 | 209.4 | 4.4% |
| **Age Groups** | | | |
| < 5 | 26.4 | 216.0 | 3.1% |
| 5-14 | 9.7 | 168.6 | 1.4% |
| 15-49 | 25.6 | 215.2 | 3.0% |
| 50-64 | 82.5 | 196.2 | 10.5% |
| 65+ | 163.9 | 236.9 | 17.3% |
| **Education level** (only persons >5 years) | | | |
| None | 47.6 | 244.0 | 4.9% |
| Primary | 25.7 | 194.9 | 3.3% |
| Secondary | 31.7 | 200.8 | 3.9% |
| High School | 49.1 | 242.0 | 5.1% |
| Literate | 28.2 | 199.3 | 3.5% |
| Illiterate | 43.9 | 240.1 | 4.6% |
| **Household Income** | | | |
| First Quintile (poorest) | 29.6 | 223.1 | 3.3% |
| Second Quintile | 28.7 | 197.5 | 3.6% |
| Third Quintile | 29.4 | 217.0 | 3.4% |
| Fourth Quintile | 34.2 | 213.0 | 4.0% |
| Fifth Quintile (richest) | 30.9 | 201.6 | 3.8% |
| **Market** | | | |
| Tegucigalpa Metro Area | 44.5 | 221.0 | 5.0% |
| San Pedro Sula | 25.8 | 195.4 | 3.3% |
| Other Urban Areas | 36.5 | 218.3 | 4.2% |
| Rural Areas | 25.7 | 204.1 | 3.1% |
| Nation-wide | **30.5** | **210.0** | **3.6%** |

During the 30-day recall period, 7.4 percent of Hondurans had an acute care visit. The MOH of Honduras has established "universal coverage" as its goal; i.e., a coverage rate of 100 percent. The right-hand column of Table 8 reveals that there is little variation in the coverage of the health care system by population characteristics. It must be concluded that the coverage of the Honduran health care system is highly equitable.

Table 9 presents rates for chronic illness care in the last three months using the same measures as those in Table 8. The concentration rates are higher than they were for acute care, as is expected since chronic illness care is measured over a three-month period. On average the rates are about 50 percent higher. The consultation rates, however, are in general about one-quarter of what they were for acute care, although there are some differences. As one would expect, the prominent position of young children does not characterize chronic care, and the rate climbs in a much more pronounced manner with increasing age categories. Females' relatively high consultation rate differential is even greater for chronic care. The degree of equity in consultation rates by income quintile is remarkably high. The rural areas remain the only strata with subnational rates. The highest rate is in Tegucigalpa. These differences do not reflect differences in the age composition of the populations of these strata. Both have mean ages of 24, and the median age of SPS is actually higher than Tegucigalpa's, 20 and 19, respectively. The differences may be due to the relative proximity of the national hospitals, which treat a large number of chronic care patients and at very low prices.

## 3.2 A Closer Look at MOH Ambulatory Care

In order to better understand the role of the MOH in the Honduran health care delivery system it is also necessary to analyze the types of ailments and patients it treats compared to other sources of care.

### 3.2.1 Variations in Disease/Illness Mix: MOH versus Other Sources of Care

Tables 11 and 12 show the composition of MOH patients and of all other sources of care for acute and chronic conditions, respectively.

Table 11 presents the eight categories of acute illnesses with the highest frequencies, including a residual, catchall "All Other" category. "All other" includes the sum of the 20 other specific types of illnesses identified in the close-ended responses. Section A of the table presents the number of patients with each of the most commonly reported conditions rank-ordered by their MOH frequencies. Section B shows the case mix of each sector, and section C shows the treatment site of each of the top conditions. While both the MOH and non-MOH sectors had the same top seven illnesses, the rank ordering of these illnesses varied substantially by sector. In both sectors, respiratory problems was the most common illness and "all other" was the next most frequent, with these categories accounting for 56 percent of the cases in the MOH and 50 percent for the other providers.

**Table 11: Acute Outpatient Care Case Mix: MOH versus All Other Sources**

| | All MOH Sources | All Non-MOH Sources | All Sources |
|---|---|---|---|
| **A. Rank-ordered by No. of Patients** | | | |
| Respiratory Problem | 92,857 | 62,895 | 155,751 |
| Malaria/Dengue | 33,792 | 20,699 | 54,492 |
| All Other | 40,940 | 34,686 | 75,626 |
| Fever | 21,360 | 14,797 | 36,157 |
| Diarrhea/Vomitting | 15,456 | 10,914 | 26,371 |
| Skin Problem | 13,759 | 11,016 | 24,775 |
| Other Digestive Problem | 13,642 | 7,684 | 21,326 |
| Eye Problems | 9,105 | 32,443 | 41,548 |
| **Total** | **240,911** | **195,134** | **436,045** |
| **B. Each Type of Facility's Case Mix** | | | |
| Respiratory Problem | 39% | 32% | 36% |
| Malaria/Dengue | 14% | 11% | 12% |
| All Other | 17% | 18% | 17% |
| Fever | 9% | 8% | 8% |
| Diarrhea/Vomitting | 6% | 6% | 6% |
| Skin Problem | 6% | 6% | 6% |
| Other Digestive Problem | 6% | 4% | 5% |
| Eye Problems | 4% | 17% | 10% |
| **Total** | **100%** | **100%** | **100%** |
| **C. Distribution of Each Illness by Facility Treatment Site** | | | |
| Respiratory Problem | 60% | 40% | 100% |
| Malaria/Dengue | 62% | 38% | 100% |
| All Other | 54% | 46% | 100% |
| Fever | 59% | 41% | 100% |
| Diarrhea/Vomitting | 59% | 41% | 100% |
| Skin Problem | 56% | 44% | 100% |
| Other Digestive Problem | 64% | 36% | 100% |
| Eye Problems | 22% | 78% | 100% |
| **Total** | **55%** | **45%** | **100%** |

As shown in Table 11, the major differences in the acute outpatient care case mix of the MOH and non-MOH sectors are eye problems and respiratory problems. As Section C indicates, 78 percent of eye problems were treated in facilities other than the MOH. Eye problems constituted 17 percent of the presenting conditions in the non-MOH sector, compared to just 4 percent in the MOH facilities (see Section B). This is the most striking difference, and appears to reflect the public's strong preference for non-MOH providers when it comes to treating eye problems (as opposed to it being simply a derivative of the non-MOH's regular clientele having more eye problems).

The differences in treatment of respiratory illnesses are far less dramatic. Nearly two in every five acute illness ambulatory visits in an MOH facility involve treatment for a respiratory problem. The corresponding proportion in non-MOH providers is slightly less than a third.

When analyzing variations in the treatment site (Table 11, Section C) of an illness, it is important to bear in mind that the MOH treated 55 percent of persons who sought care for an acute illness in the past 30 days. The most significant variations in treatment sites between the MOH and non-MOH providers were for malaria/dengue, other digestive problems, and eye problems. The MOH providers treated disproportionately large shares of malaria/dengue and "other digestive problems," 62 and 64 percent, respectively, and, as already noted, a substantially smaller share of eye problems.

Table 12 has the same format as Table 11. The eight most commonly identified chronic illness categories (the subset of the list of 28 that are presented in the table) were the same for MOH and non-MOH providers. The most significant differences in the case mix of ambulatory care of chronic illness are in the "all other" category and in cases of asthma. The high proportion of non-MOH patients that fall into "all other" suggests that the chronic disease caseload of these providers is less concentrated and more varied than that of MOH facilities. The MOH had a high proportion of chronically ill patients with asthma (17 percent) compared to the non-MOH's 10 percent—a 70 percent difference.

**Table 12: Chronic Outpatient Care Case Mix: MOH versus All Other Sources**

| Type of Illness or Condition | All MOH Sources | All Non-MOH Sources | All Sources |
|---|---|---|---|
| **A. Rank-ordered by No. of Patients** | | | |
| All Other | 36,671 | 46,003 | 78,674 |
| Asthma | 17,902 | 12,753 | 30,655 |
| Articulation Proble, (Arthritis, Rheumatism) | 14,014 | 16,314 | 30,328 |
| Hypertension (High Blood Pressure) | 9,398 | 10,489 | 19,887 |
| Cardiovascular Problem | 8,066 | 9.243 | 17,309 |
| Other Digestive Problem | 4,382 | 10,503 | 14,885 |
| Diabetes | 6,004 | 6,855 | 12,859 |
| Respiratory Problem | 3,755 | 8,918 | 12,673 |
| Ear Problem | 4,740 | 2,044 | 6,784 |
| Don't know | 4,025 | 874 | 4,899 |
| **Total** | **104,957** | **123,996** | **228,953** |
| **B. Each Type of Facility's Case Mix** | | | |
| All Other | 31% | 37% | 34% |
| Asthma | 17% | 10% | 13% |
| Articulation Proble, (Arthritis, Rheumatism) | 13% | 13% | 13% |
| Hypertension (High Blood Pressure) | 9% | 8% | 9% |
| Cardiovascular Problem | 8% | 7% | 8% |
| Other Digestive Problem | 4% | 8% | 7% |
| Diabetes | 6% | 6% | 6% |
| Respiratory Problem | 4% | 7% | 6% |

| | | | |
|---|---|---|---|
| Ear Problem | 5% | 2% | 3% |
| Don't know | 4% | 1% | 2% |
| **Total** | **100%** | **100%** | **100%** |
| **C. Distribution of Each Illness by Facility Treatment Site** | | | |
| All Other | 42% | 58% | 100% |
| Asthma | 58% | 42% | 100% |
| Articulation Proble, (Arthritis, Rheumatism) | 46% | 54% | 100% |
| Hypertension (High Blood Pressure) | 47% | 53% | 100% |
| Cardiovascular Problem | 47% | 53% | 100% |
| Other Digestive Problem | 29% | 71% | 100% |
| Diabetes | 47% | 53% | 100% |
| Respiratory Problem | 30% | 70% | 100% |
| Ear Problem | 70% | 30% | 100% |
| Don't know | 82% | 18% | 100% |
| **Total** | **46%** | **54%** | **100%** |

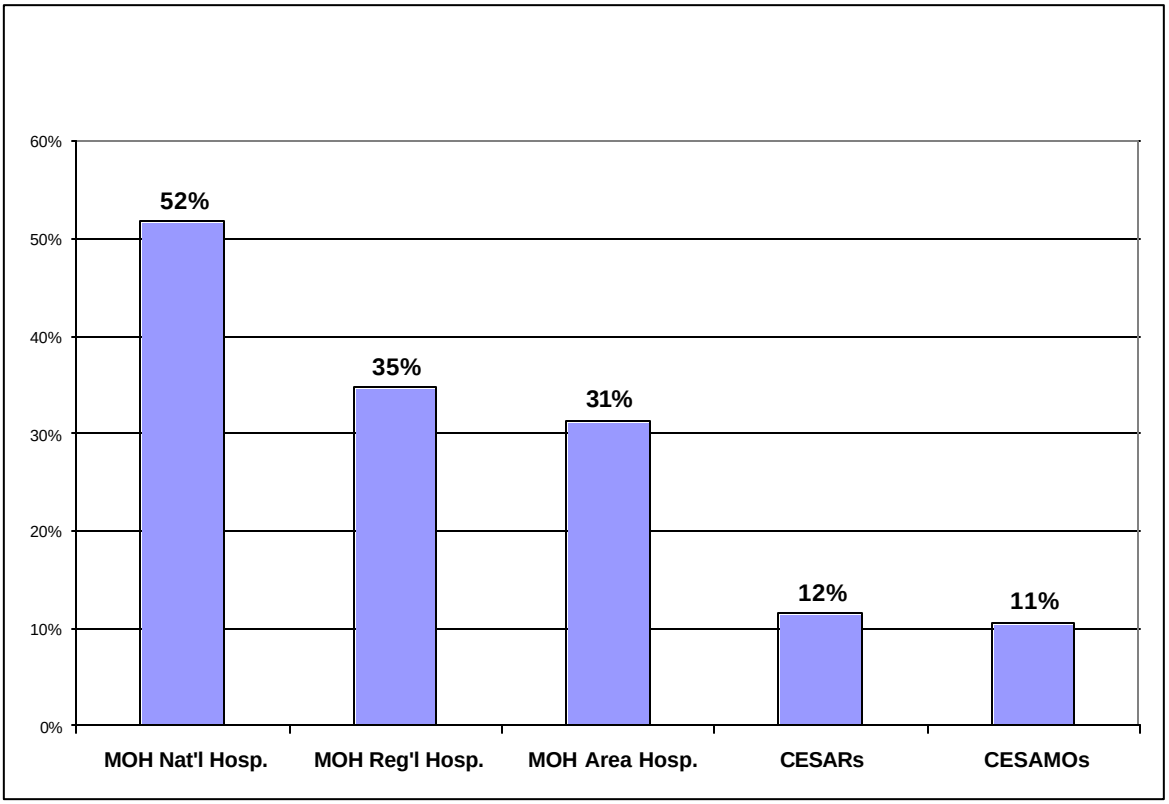
The fact that the Ministry treats almost two-thirds of all acute cases of "other digestive problems," but treats less than 30 percent of these problems when they are of a chronic nature may indicate that if patients with an acute "other digestive problem" are not successfully treated by the MOH, they will seek subsequent care elsewhere for what has become a chronic problem. Similarly, the MOH treats 60 percent of all acute respiratory problems, but only half that proportion for chronic respiratory problems.

### 3.2.2 Variations in Disease/Illness Mix Among MOH Facilities

As is readily apparent in Figure 16, the proportion of chronically ill patients increases as one goes up the MOH infrastructure pyramid from the CESARs and CESAMOs, to the area hospitals, to the regional hospitals, and finally to the national hospitals.[5]

[5] What constitutes a "chronic" illness is determined by each individual respondent who self-reported to have been ill in the past 30 days. Recall, interviewees were asked if they had any health problem or condition in the past 30 days. If they answered in the affirmative, they were asked if any of their reported health problems were acute, and they were later asked if any of their reported health problems were chronic.

**Figure 16: The Proportion of MOH Facilities' Ambulatory Caseload Comprised of Chronically Ill Patients**




Tables 13 and 14 show the acute and chronic illness case mix of each type of MOH facility. As may be seen in the first two lines of Section B of Table 13, more than half of the acute illness visits and about 45 percent of the all visits to CESARs and CESAMOs were for respiratory problems and malaria or dengue (57 and 55 percent, respectively).

**Table 13: Variations in MOH Outpatient Acute Care Case Mix, by Source of Care**

| | MOH Hospitals | | | CESAMOs | CESARs | All MOH Sources |
|---|---|---|---|---|---|---|
| | National | Regional | Area | | | |
| **A. Rank-ordered by No. of Patients** | | | | | | |
| Respiratory Problem | 5,877 | 4,511 | 2,113 | 42,789 | 37,568 | 92,857 |
| Malaria/Dengue | 621 | 1,939 | 347 | 9,461 | 21,424 | 33,792 |
| All Other | 5,242 | 4,001 | 2,042 | 7,940 | 7,000 | 26,226 |
| Fever | 3,294 | 2,069 | | 8,316 | 7,680 | 21,360 |
| Diarrhea/Vomitting | 851 | 1,899 | 225 | 8,195 | 4,287 | 15,456 |
| Other | 774 | 1,566 | 217 | 5,591 | 6,565 | 14,714 |
| Skin Problem | 459 | 1,547 | | 8,049 | 3,704 | 13,759 |
| Other Digestive Problem | 546 | 1,563 | | 4,917 | 6,617 | 13,642 |
| Eye Problems | | | | 672 | 8,433 | 9,105 |
| **Total** | **17,664** | **19,096** | **4,945** | **95,928** | **103,278** | **240,911** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **B. Each Type of Facility's Case Mix** | | | | | | |
| Respiratory Problem | 33% | 24% | 43% | 45% | 36% | 39% |
| Malaria/Dengue | 4% | 10% | 7% | 10% | 21% | 14% |
| Other | 30% | 21% | 41% | 8% | 7% | 11% |
| Fever | 19% | 11% | 0% | 9% | 7% | 11% |
| Diarrhea/Vomitting | 5% | 10% | 5% | 9% | 4% | 6% |
| Skin problem | 4% | 8% | 4% | 6% | 6% | 6% |
| Other Digestive Problem | 3% | 8% | 0% | 8% | 4% | 6% |
| Eye Problems | 3% | 8% | 0% | 5% | 6% | 6% |
| All Other | 0% | 0% | 0% | 1% | 8% | 4% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **C. Distribution of Each Illness by Facility Treatment Site** | | | | | | |
| Respiratory Problem | 6% | 5% | 2% | 46% | 40% | 100% |
| Malaria/Dengue | 2% | 6% | 1% | 28% | 63% | 100% |
| Other | 20% | 15% | 8% | 30% | 27% | 100% |
| Fever | 15% | 10% | 0% | 39% | 36% | 100% |
| Diarrhea/Vomitting | 6% | 12% | 1% | 53% | 28% | 100% |
| Skin Problem | 5% | 11% | 1% | 38% | 45% | 100% |
| Other Digestive Problem | 3% | 11% | 0% | 59% | 27% | 100% |
| Eye Problems | 4% | 11% | 0% | 36% | 49% | 100% |
| All Other | 0% | 0% | 0% | 7% | 93% | 100% |
| **Total** | **7%** | **8%** | **2%** | **40%** | **43%** | **100%** |

As is shown in the first two lines of Section C of Table 13, more than 86 percent of all respiratory problems, 91 percent of malaria and dengue cases, and 85 percent of all eye problems treated in an MOH facility are seen at CESARs and CESAMOs. Given the concentration of these illnesses and the very high proportion of all cases that they comprise in CESARs and CESAMOs, it is clear that the Ministry needs to be sure that the staff of these facilities are well trained and the facilities are well equipped and well stocked to deal with these ailments. The CESARs' chronic disease mix is dominated by the disproportionate number of patients seeking care for asthma and problems of articulation (arthritis, rheumatism, etc.). Asthma is the most common chronic problem treated at MOH facilities and represents a surprisingly large proportion of the chronic illness caseloads at national hospitals (21 percent), CESARs (21 percent), and CESAMOs (20 percent).

In general, the caseloads at MOH hospitals are more variable than those at the CESAMOs and CESARs, and this reflects their role as referral centers. For instance, 71 percent of chronic disease problems that are of an unknown type (listed as "don't know" in Section C of Table 14) are treated at national hospitals. While the national hospitals treat only 13 percent of all patients with acute respiratory illnesses, they treat 69 percent of those with chronic respiratory illnesses. Similarly, the hospitals see 15 percent of the acute "other digestive problems" cases, but as much as 51 percent of those that are chronic in nature.

**Table 14: Variations in MOH Chronic Outpatient Care Case Mix, by Type of Facility**

Chronic Care Received in the Past Three Months Arrayed by Frequency

| | MOH Hospitals | | | CESAMOs | CESARs | All MOH Sources |
|---|---|---|---|---|---|---|
| | National | Regional | Area | | | |
| **A. Rank-ordered by No. of Patients** | | | | | | |
| Asthma | 6,336 | 720 | 119 | 6,709 | 4,018 | 17.902 |
| Articulation Problem (Arthritis, Rheumatism) | 630 | 2,149 | | 8,666 | 2,569 | 14,014 |
| Hypertension (High Blood Pressure) | 3,380 | 1,098 | 217 | 2,873 | 1,830 | 9,398 |
| Cardiovascular Problem | 3,109 | 2,020 | 366 | 830 | 1,742 | 8,066 |
| Diabetes | 2,115 | 3,142 | 487 | | 259 | 6,004 |
| Ear Problem | 1,143 | | | 2.566 | 1,032 | 4,740 |
| Other Digestive Problem | 719 | 649 | 873 | 1,692 | 449 | 4,382 |
| Don't Know | 2,855 | 156 | 106 | 908 | | 4,025 |
| Rerspiratory Problem | 1,603 | 963 | | 739 | 450 | 3,755 |
| All Other | 8,155 | 9,272 | 576 | 6,494 | 8,175 | 32,671 |
| **Total** | **30,044** | **20,168** | **2,744** | **31,477** | **20,524** | **104,957** |
| **B. Each Type of Facility's Case Mix** | | | | | | |
| Asthma | 21% | 4% | 4% | 21% | 20% | 17% |
| Articulation Problem (Arthritis, Rheumatism) | 2% | 11% | 0% | 28% | 13% | 13% |
| Hypertension | 11% | 5% | 8% | 9% | 9% | 9% |
| Cardiovascular Problem | 10% | 10% | 13% | 3% | 8% | 8% |
| Diabetes | 7% | 16% | 18% | 0% | 1% | 6% |
| Ear Problem | 4% | 0% | 0% | 8% | 5% | 5% |
| Other Digestive Problem | 2% | 3% | 32% | 5% | 2% | 4% |
| Don't Know | 10% | 1% | 4% | 3% | 0% | 4% |
| Rerspiratory Problem | 5% | 5% | 0% | 2% | 2% | 4% |
| All Other | 27% | 46% | 21% | 21% | 40% | 31% |
| **Total** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **C. Distribution of Each Illness by Facility Treatment Site** | | | | | | |
| Asthma | 35% | 4% | 1% | 37% | 22% | 100% |
| Articulation Problem (Arthritis, Rheumatism) | 4% | 15% | 0% | 62% | 18% | 100% |
| Hypertension | 36% | 12% | 2% | 31% | 19% | 100% |
| Cardiovascular Problem | 39% | 25% | 5% | 10% | 22% | 100% |
| Diabetes | 35% | 52% | 8% | 0% | 4% | 100% |
| Ear Problem | 24% | 0% | 0% | 54% | 22% | 100% |
| Other Digestive Problem | 16% | 15% | 20% | 39% | 10% | 100% |
| Don't Know | 71% | 4% | 3% | 23% | 0% | 100% |
| Rerspiratory Problem | 43% | 26% | 0% | 20% | 12% | 100% |
| All Other | 25% | 28% | 2% | 20% | 25% | 100% |
| **Total** | **29%** | **19%** | **3%** | **30%** | **20%** | **100%** |

As indicated in Section C of Table 14, the hospitals also handle a disproportionate amount of the chronic diseases of aging, such as hypertension (50 percent) and cardiovascular problems (69 percent).[6] In contrast, the CESARs and CESAMOs handle relatively more infectious diseases.

### 3.2.3 Variations in Patient Mix: MOH versus Other Sources of Care

Table 15 presents total annual ambulatory consultations disaggregated by a variety of population characteristics and type of provider.

[6] These are the sums of the three hospitals' shares.

## Table 15: Total Annual Ambulatory Consultations

(Includes Acute and Chronic Illness and Preventive Visits

| Characteristics of the Population | All Providers | MOH Hospitals | | | | CESAMO | CESAR | Total MOH | IHSS Hospitals & Clinics | Private Hospitals | Private Clinics & Physicians | All Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | National | Regional | Area | Total | | | | | | | |
| Male | 5,332,701 | 275,922 | 328,153 | 65,088 | 669,163 | 1,042,982 | 1,121,968 | 2,834,112 | 250,815 | 174,135 | 1,509,014 | 564,625 |
| Female | 7,741,354 | 441,090 | 320,534 | 123,425 | 885,050 | 1,702,361 | 1,896,790 | 4,484,201 | 289,737 | 217,265 | 2,150,531 | 599,620 |
| **Age Groups** | | | | | | | | | | | | |
| < 5 | 4,555,714 | 188,255 | 181,104 | 46,287 | 415,647 | 1,207,496 | 1,335,564 | 2,958,706 | 119,559 | 93,048 | 1,026,516 | 357,885 |
| 5-14 | 2,879,862 | 163,797 | 118,796 | 24,789 | 307,382 | 735,779 | 773,391 | 1,816,552 | 15,899 | 104,370 | 639,379 | 303,662 |
| 15-49 | 4,001,388 | 257,335 | 185,631 | 99,980 | 542,946 | 679,890 | 713,001 | 1,935,837 | 347,485 | 116,491 | 1,234,897 | 366,678 |
| 50-64 | 799,465 | 55,329 | 84,836 | 8,035 | 148,199 | 73,983 | 96,482 | 318,664 | 38,807 | 38,558 | 328,132 | 75,303 |
| 65+ | 837,630 | 52,295 | 78,325 | 9,431 | 140,050 | 48,174 | 100,329 | 288,553 | 18,794 | 38,940 | 430,621 | 60,721 |
| **Education Level** (only persons >5 years) | | | | | | | | | | | | |
| None | 1,631,343 | 63,464 | 162,917 | 16,070 | 242,451 | 312,285 | 438,048 | 992,784 | 7,628 | 24,227 | 472,684 | 134,020 |
| Primary | 4,999,512 | 347,274 | 218,741 | 82,733 | 648,748 | 926,625 | 1,073,724 | 2,649,097 | 244,397 | 196,944 | 1,427,032 | 482,041 |
| Secondary | 1,194,140 | 75,966 | 64,122 | 21,835 | 161,924 | 121,104 | 71,957 | 354,985 | 94,517 | 73,451 | 539,061 | 132,125 |
| High School | 293,475 | 28,281 | 4,412 | 20,832 | 53,525 | 17,973 | 2,880 | 74,378 | 9,863 | 39,447 | 142,266 | 27,521 |
| Literate | 6,226,505 | 431,379 | 284,378 | 125,400 | 841,157 | 1,016,982 | 1,095,909 | 2,954,048 | 391,574 | 249,334 | 2,001,763 | 629,786 |
| Illiterate | 1,891,957 | 85,266 | 165,814 | 16,070 | 267,151 | 361,010 | 490,716 | 1,118,877 | 6,139 | 27,607 | 579,276 | 160,058 |
| **Household Income** | | | | | | | | | | | | |
| First Quintile (poorest) | 2,345,186 | 86,711 | 120,920 | 44,624 | 252,255 | 648,260 | 858,712 | 1,759,227 | 18,687 | 2,211 | 296,542 | 268,519 |
| Second Quintile | 2,819,636 | 103,136 | 144,261 | 24,949 | 272,347 | 608,232 | 898,579 | 1,779,158 | 87,575 | 9,684 | 584,444 | 358,774 |
| Third Quintile | 2,759,440 | 159,029 | 116,570 | 30,628 | 306,227 | 638,240 | 649,064 | 1,593,531 | 214,200 | 104,885 | 700,391 | 146,432 |
| Fourth Quintile | 2,604,111 | 195,899 | 148,334 | 51,160 | 395,393 | 526,150 | 457,736 | 1,379,280 | 110,392 | 97,804 | 762,825 | 253,810 |
| Fifth Quintile (richest) | 2,504,162 | 172,249 | 118,594 | 37,144 | 327,986 | 322,425 | 152,578 | 802,989 | 54,478 | 176,811 | 1,290,702 | 179,182 |
| **Market** | | | | | | | | | | | | |
| Tegucigalpa Metro Area | 1,930,024 | 398,010 | 7,649 | 1,948 | 407,607 | 461,365 | 30,140 | 899,112 | 200,342 | 188,914 | 515,618 | 126,038 |
| San Pedro Sula | 1,482,972 | 13,860 | 65,285 | 3,418 | 82,563 | 273,996 | 17,884 | 374,443 | 63,645 | 53,126 | 778,784 | 212,974 |
| Other Urban Areas | 3,058,321 | 123,059 | 337,701 | 138,338 | 599,098 | 653,686 | 249,362 | 1,502,146 | 178,861 | 164,806 | 990,715 | 221,793 |
| Rural Areas | 6,602,738 | 182,086 | 238,052 | 44,818 | 464,957 | 1,356,308 | 2,721,389 | 4,542,653 | 91,591 | 97,277 | 1,196,592 | 674,625 |
| **Nation-wide** | **13,074,055** | **717,016** | **648,687** | **188,520** | **1,554,223** | **2,745,341** | **3,018,759** | **7,318,322** | **540,544** | **391,406** | **3,659,561** | **1,164,221** |

Figure 17 shows the distribution of ambulatory visits by age group, juxtaposing MOH and non-MOH sources of care. MOH patients are more likely to be female, children, poor, rural, and less educated. There is an inverse relationship between age and the number of visits for MOH facilities. Two-thirds of the Ministry's consultations were provided to persons less than 15 years of age. In contrast, the 15-to-49-year-old age group received the most visits of any of the age groups provided by non-MOH sources.

**Figure 17: The Age Mix of MOH versus Non-MOH Ambulatory Patients**

(Includes Curative and Preventive Care)

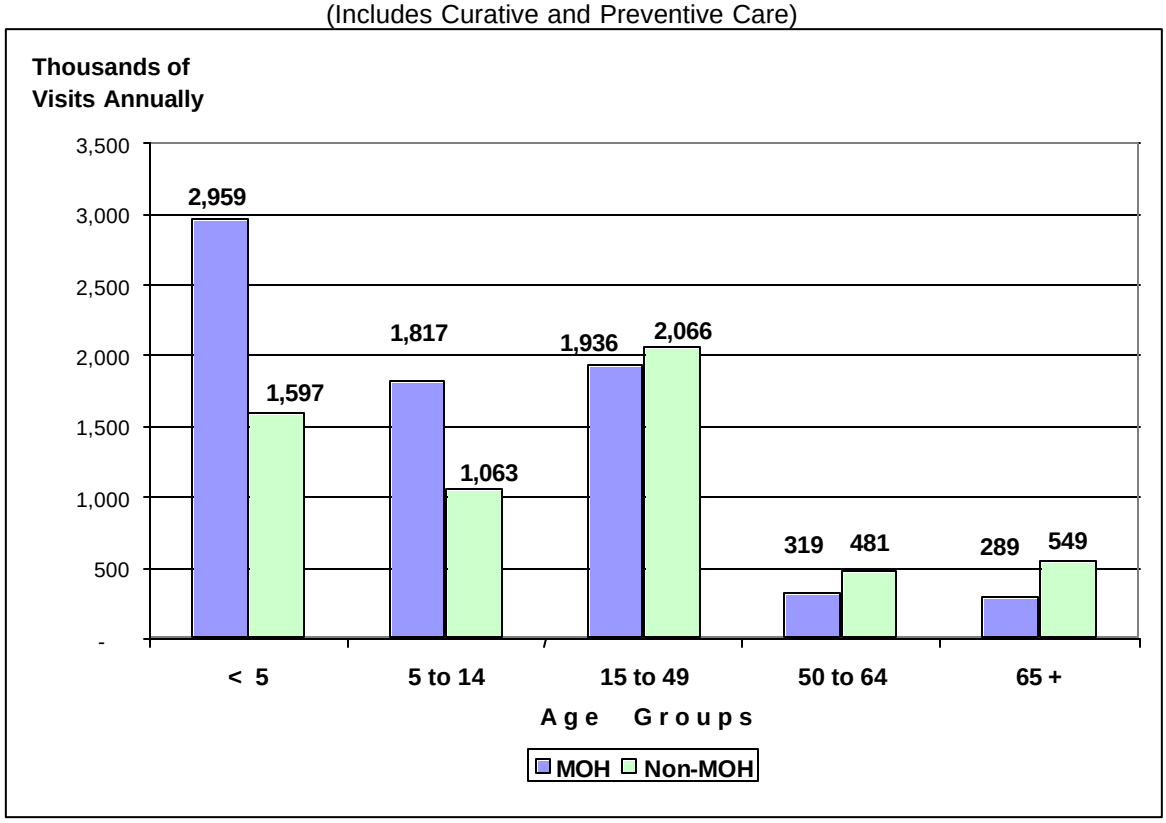



Figure 18 shows the proportion of care provided by the MOH and non-MOH sources to each of the age groups. MOH provided more than 60 percent of the care for children, but less than 40 percent of the care for persons 50 years of age or older. The case mix of the MOH has a higher female-to-male ratio compared to that of non-MOH providers.

**Figure 18: Sources of Ambulatory Care by Age Group: MOH versus all Other Sources**

(Includes Curative and Preventive Care)

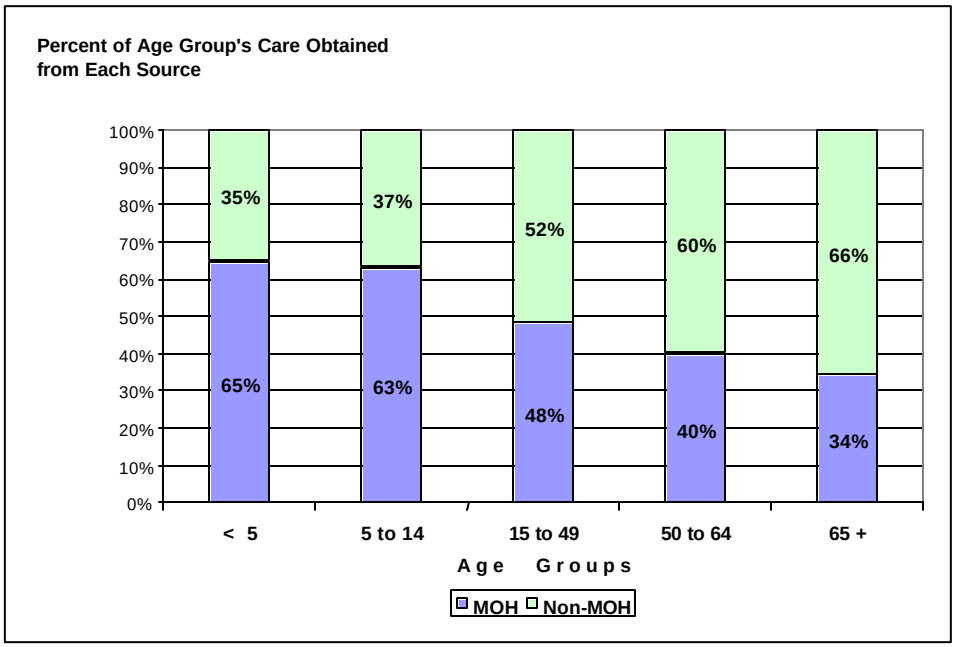
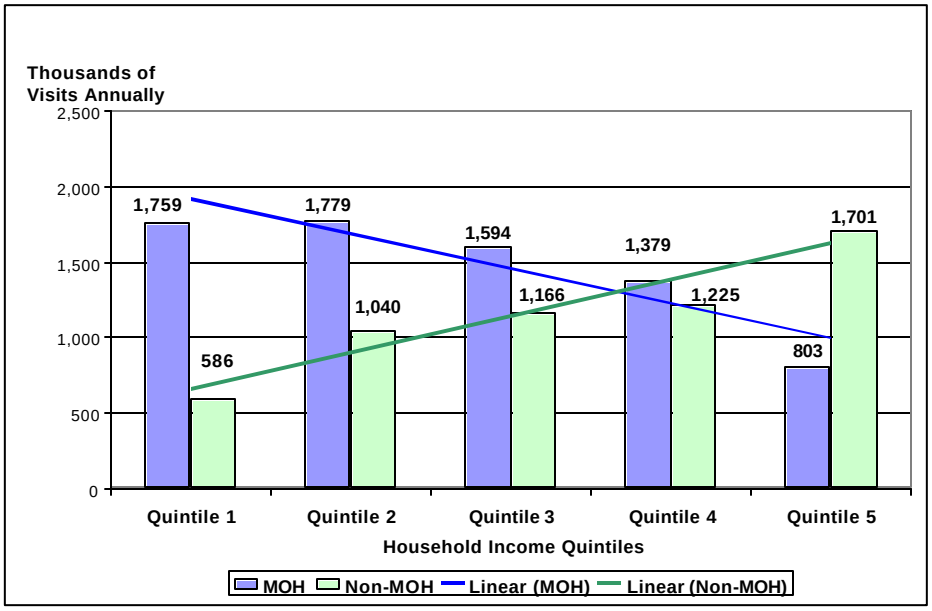


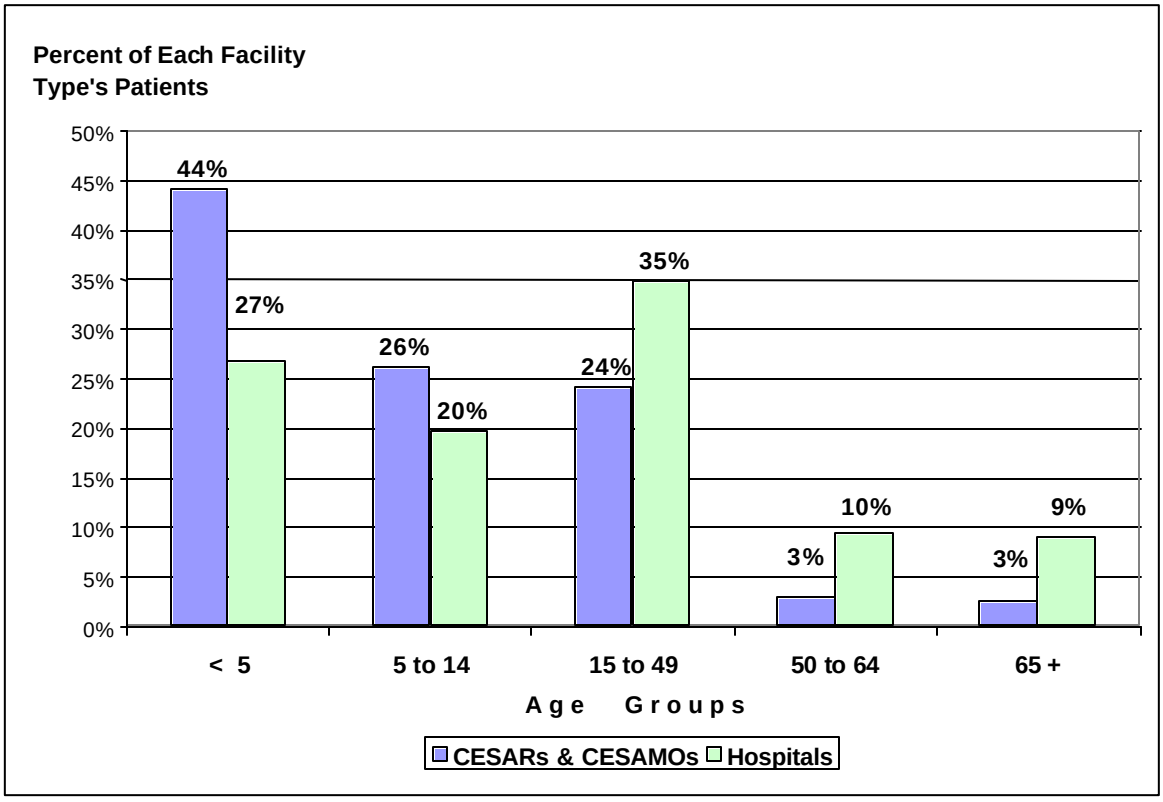

Figure 19 shows the distribution of MOH and non-MOH ambulatory care by household income quintiles. As the linear regression-fitted trend lines show, there is an inverse relationship between household income quintile and the amount of care provided by the MOH and a direct relationship between household income quintile and the amount of care provided by non-MOH providers. Of the total 2.35 million ambulatory care visits made by the poorest one-fifth of Hondurans, 1.76 million (75 percent) is obtained from the MOH. The richest one-fifth of the population obtains 32 percent of its ambulatory care from the MOH.

**Figure 19: Household Income of Ambulatory Patients: MOH versus Non-MOH Sources of Care**



In summarizing these disease and patient case mix findings, it is clear that the role of the MOH within the health care market of Honduras is that of key primary health care provider, focusing on the treatment of infectious disease and prevention and acting as the provider of a disproportionately large share of all care provided to Honduras' poor and its children. The MOH provides 85 percent more care to children less than five years of age and 71 percent more care to children aged 5 to 14. Whereas the MOH's overall market share of visits is 59 percent, it actually provides less than half of the care to persons in the three oldest age groups (see Figure 20).

**Figure 20: Variations in the Age Mix of Ambulatory MOH Patients, by Type of Facility**




The MOH mostly provides care to children, and it is the Ministry's disproportionately large share of the care provided to children that pulls its overall average up to 59 percent. The MOH provides roughly two-thirds of all the care that Honduran children receive. Of the five age groups analyzed, the MOH's share of the group under five years old is greatest at 65 percent (Figure 18). The other key distinguishing characteristic about MOH care is that it provides 84 percent of all preventive care.

### 3.2.4 Variations in Patient Mix Among MOH Facilities

While the MOH is clearly the key primary health care provider in Honduras, it is the CESARs and CESAMOs, and not the MOH hospitals, that give the Ministry that distinction and that constitute the heart of the primary health care system of Honduras. Moreover, it is the CESARs and CESAMOs that provide half of all preventive services provided in the country, treat a larger absolute number of persons with infectious diseases, have a disease case mix that is comprised of relatively more

infectious diseases, and provide 46 percent of all of the ambulatory care provided to children. The role played by the CESARs and CESAMOs in treating relatively more infectious diseases is evident in the age profile of their patients: 65 percent of their curative care visits are provided to patients less than 15 years of age. The age mix of MOH hospitals differs in that the share of young children in hospital ambulatory care is about half of what it is in the CESARs and CESAMOs, 24 and 44 percent, respectively (Figure 20). The age group receiving the largest share of hospital care is the 15-to-49-year olds. Within the MOH, the patient mix of the hospitals is distinct from that of the CESARs and CESAMOs, and it more closely approximates the patient mix of non-MOH providers: there are more chronically ill patients and on average the patients are older with the highest proportion of patients coming from the 15-to-49-year-old age group (Figure 20).

## 3.3 Variations in Hospitalization Rates

Table 16 shows the number and percent of Hondurans who reported they were hospitalized, in any hospital or in MOH hospitals, at least once in the 12-month period prior to being interviewed. Females and people living in urban areas were significantly more likely (80 percent) to have been hospitalized. (The differences in these means are statistically significant; t=130.83 and t=130.80, respectively.) Children had markedly lower hospitalization rates, about half the rates of adults, and the three adult age groupings (15 to 49, 50 to 64, and 65 and older) had steadily increasing rates. (The differences between the children and adults' mean hospitalization rates is statistically significant; t=216.5.) Plotting these age-specific hospitalization rates maps out the familiar u-shaped curve, which is characteristic of most countries. Persons who are literate (3.6 percent) were more likely to have been hospitalized than illiterate persons (3.1 percent), indicating that there is a direct relationship between a person's level of education and the likelihood that they were hospitalized. (These differences were statistically significant, t=28.6.) While there is a direct relationship between household income quintile and the hospitalization rate, variations by quintile are not significant. The highest quintile is only 16 percent greater than the lowest. In terms of strata, or markets, SPS has the highest hospitalization level, half as large as the nationwide rate and double that of persons who reside in rural areas.

When only MOH hospitalization is considered, the degree of variation in hospitalization rates by different characteristics is tempered. This reflects the fact that many of the characteristics that are associated with higher hospitalization rates are also associated with higher rates of private vis-à-vis public health care use. This is particularly evident in the rates characterized by level of education and income. Whereas these characteristics are positively associated with general, overall hospital utilization rates, they are inversely related to MOH hospitalization rates. Relative to other persons who were hospitalized in the previous year, MOH hospital users are more likely to be younger, female, less educated, poorer, and residents of rural areas.

The MOH hospitalization rates across the four strata are substantially more similar than the general, overall hospitalization rates. When only MOH hospital use is considered, SPS's rate falls to less than half its all-hospitals' level, and it becomes equal to the nationwide rate. This is because of the high proportion of hospital care provided by private hospitals in SPS.

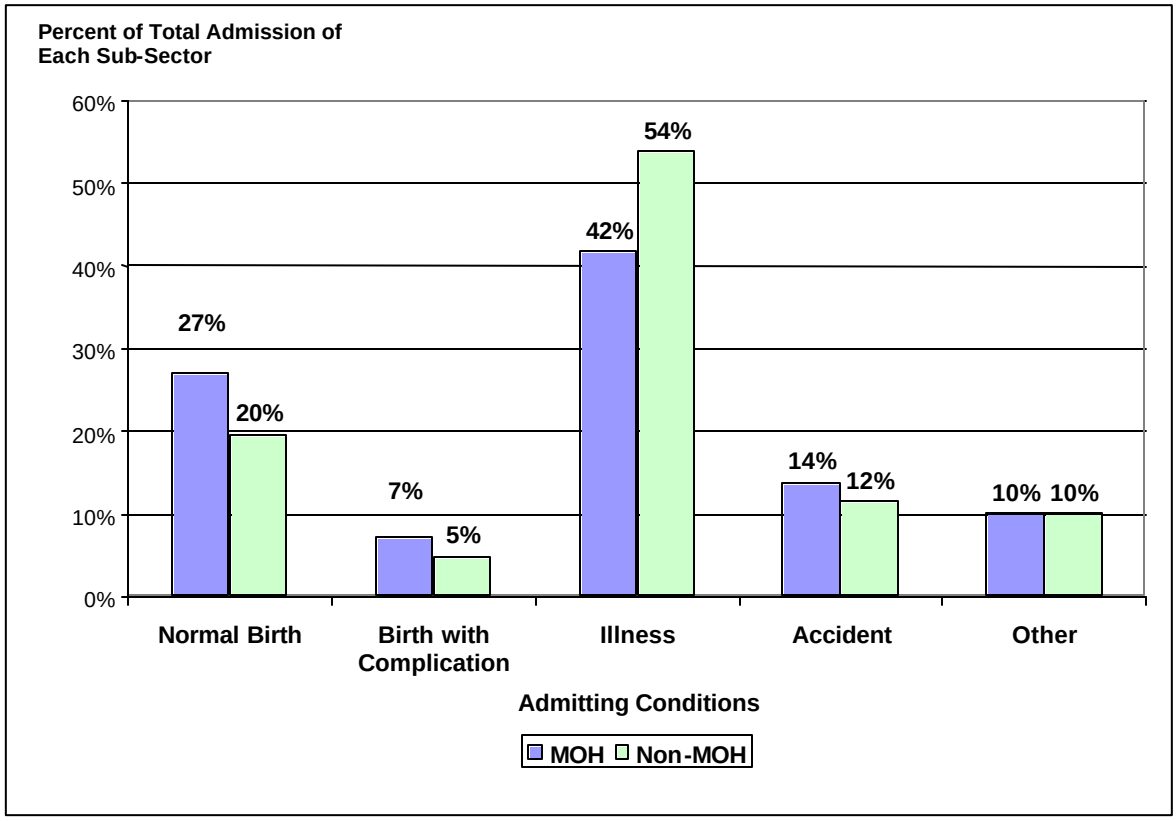
**Table 16: Hospitalizations in the Past Twelve Months**

| Characteristics of the Population | Number of Respondents | All Hospitalizations | | Ministry of Health Hopitalizations | |
|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent |
| Male | 3,075,592 | 73,496 | 2.4% | 55,941 | 1.8% |
| Female | 3,194,807 | 136,307 | 4.3% | 93,864 | 2.9% |
| **Age Groups** | | | | | |
| < 5 | 903,143 | 25,468 | 2.8% | 18,969 | 2.1% |
| 5-14 | 1,841,211 | 18,077 | 1.0% | 12,781 | 0.7% |
| 15-49 | 2,827,191 | 125,805 | 4.4% | 92,125 | 3.3% |
| 50-64 | 448,585 | 23,304 | 5.2% | 16,385 | 3.7% |
| 65+ | 250,269 | 17,150 | 6.9% | 9,544 | 3.8% |
| Urban | 2,744,146 | 120,997 | 4.4% | 71,744 | 2.6% |
| Rural | 3,526,253 | 88,806 | 2.5% | 78,060 | 2.2% |
| **Education Level** (only persons >5 years) | | | | | |
| None | 1,036,660 | 33,478 | 3.2% | 25,792 | 2.5% |
| Primary | 3,155,855 | 103,782 | 3.3% | 81,344 | 2.6% |
| Secondary | 854,790 | 37,007 | 4.3% | 19,116 | 2.2% |
| High School | 139,883 | 7,133 | 5.1% | 2,544 | 1.8% |
| Literate | 4,032,201 | 145,982 | 3.6% | 101,294 | 2.5% |
| Illiterate | 1,154,986 | 35,418 | 3.1% | 27,502 | 2.4% |
| **Household Income** | | | | | |
| First Quintile (poorest) | 1,245,578 | 38,449 | 3.1% | 32,770 | 2.6% |
| Second Quintile | 1,258,647 | 40,524 | 3.2% | 32,887 | 2.6% |
| Third Quintile | 1,243,368 | 42,512 | 3.4% | 32,336 | 2.6% |
| Fourth Quintile | 1,261,526 | 42,942 | 3.4% | 27,997 | 2.2% |
| Fifth Quintile (richest) | 1,250,652 | 45,012 | 3.6% | 23,815 | 1.9% |
| **Market** | | | | | |
| Tegucigalpa Metro Area | 818,058 | 32,550 | 4.0% | 18,038 | 2.2% |
| San pedro Sula | 554,902 | 27,563 | 5.0% | 13,329 | 2.4% |
| Other Urban Areas | 1,371,187 | 60,884 | 4.4% | 40,378 | 2.9% |
| Rural Areas | 3,526,253 | 88,806 | 2.5% | 78,060 | 2.2% |
| **Nation-wide** | **6,300,495** | **209,802** | **3.3%** | **149,804** | **2.4%** |

## 3.4 Variations in MOH versus Non-MOH Admitting Conditions and Average Lengths of Stay

The causes of hospitalization for patients at MOH and non-MOH hospitals were similar. The major difference was in the proportion of admissions that were for births. Births (normal plus complications) accounted for a total of 34 percent of MOH admissions compared to 25 percent of admissions at other hospitals (see Figure 21).

**Figure 21: Admitting Conditions, MOH versus Non-MOH Hospitals**




While non-MOH hospitals accounted for 54 percent of general illnesses' admission, the average lengths of stay were also very similar. The MOH had a mean of 5.84 days compared to 5.76 days at non-MOH hospitals, while the medians were 3.0 and 2.0, respectively.

# 4. Patient Expenditures for Health Care

The ENIGH questionnaire was designed to gather information on the total costs associated with obtaining health care. Questions were asked about the indirect costs of obtaining care (such as transportation, food, and lodging), as well as the direct costs. For each of the three types of ambulatory care—acute illness, chronic illness, and preventive care—distinct questions were asked about payments that were made for the care at the site where patients were treated. Patients were also asked whether the provider prescribed or recommended that the patient go elsewhere to obtain medicines; laboratory examinations, x-rays, or other tests; or some type of equipment or apparatus. Those who responded affirmatively were asked if they had purchased these items, and if so, how much they had paid for them. Thus for each type of ambulatory care there were four separate components of patient costs: one component consisting of the indirect costs of transportation, food, and lodging incurred by either the patient and/or a friend or relative who had accompanied the patient in obtaining care, and four direct cost components—one all-inclusive on-site cost and three off-site, ancillary cost components. This careful line of inquiry required 39 separate questions for ambulatory care payments.

Patients who were hospitalized in the past year were asked two additional questions. They were asked if they had made any additional payments for the hospitalization, such as to the physician, and they were asked if they had to purchase or donate other supplies. For the latter of these two questions it was not specified whether these other supplies had been purchased within or outside the hospital. There were a total of 16 questions about payments for hospital care. Thus this series of inquiries about the various component costs of both hospitalization and ambulatory care consisted of a total of 55 questions, more than half of all the questions in the health component of the ENIGH questionnaire.

In contrast to the careful, comprehensive approach taken to ensure the capturing of all of the financial costs of care, no information was gathered about the nonmonetary costs of care. In particular, there were no questions about the amount of time spent traveling to and from the source of care, the amount of time spent waiting at the place of care before being seen, or the duration of the consultation. Given the generally very low fee levels of the MOH care, it is likely that the time required to obtain the care is at least as important a deterrent to obtaining care as is its financial cost. Numerous other studies of health care utilization, in low-income and high-income countries alike, have demonstrated that patients' travel and waiting time are important determinants of demand in other Central American countries (see, for example, Bitrán 1990 and Fiedler 1999). This is a serious shortcoming of the questionnaire.

It is important to bear in mind that the distribution of health care expenditures is always highly skewed to the right; i.e., a few very sick individuals account for a disproportionately large share of total expenditures. For instance, in the United States from 1987 through 2000, 1 percent of the population has annually accounted for slightly more than one-quarter of total health expenditures (Berk and Monheit, 2001). The degree to which health expenditures are skewed in Honduras will be less than it is in the United States because (among other things) the MOH's care is highly subsidized. Still the skewed nature of the distribution has important implications for developing summary measures. It means, for instance, that mean values will nearly always be more than median values and that mean values may be particularly subject to wide fluctuations owing to just one or a few

observations. An effort has been made in preparing this report to analyze the degree to which the mean values are subject to this type of distortion. When a single observation or two is particularly influential in determining the level of the mean, in order to provide a more useful characterization of the central tendency of expenditures, these observations have been deleted and this has been noted. Since each observation is weighted by a factor that can be as large as 2,524, this practice occasionally results in what appear to be inconsistent numbers of reported observations. For that reason, the number of observations also is reported generally.

## 4.1 Patient Expenditures for Ambulatory Care for Acute Illness

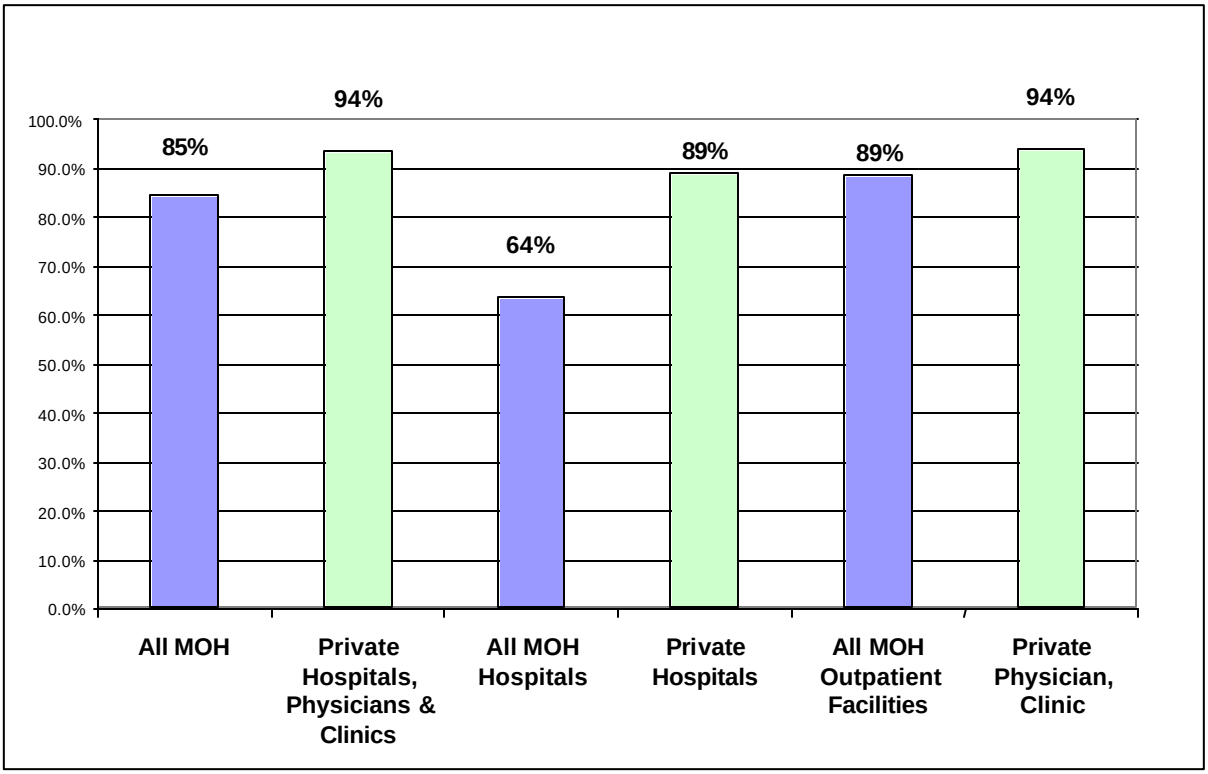
Throughout the health sector, patients paid a mean of 57 lempiras and a median of 3 lempiras for an acute ambulatory visit. Of those individuals who reported having an acute care visit, 85 percent paid for the visit. When those who were exempted from payment (15 percent) were excluded from the analysis, the mean rose to 68 lempiras and the median to 5.

Table 17 presents these data disaggregated by the type of provider or facility patients visited. IHSS patients were by far the least likely to pay for their care with only 2 percent of these patients paying. At the opposite end of the spectrum, all of the patients of traditional healers paid something for their care, as did 94 percent of the persons who turned to a private physician or clinic. A surprising finding was that persons who were treated at either a CESAR or a CESAMO were just as likely to pay something for their care as were the users of a private hospital; 89 percent of the patients of each of these sources paid for their care. Another surprising finding was that the users of MOH hospitals were less likely to have paid something for their care than were the users of the CESARs and CESAMOs. Only 64 percent of MOH hospital ambulatory patients paid something for their care compared to 89 percent at the primary health care facilities (see Figure 22).

**Table 17: Outpatient Acute Care Expenditures: Average Consultation Cost per Patient**

| Place of Consultation | All Patients | Percent Who Paid Something | Number Who Paid Something | Average Consultation Cost of All Patients | | Average Consultation Costs of Only Those Who Paid Something | |
|---|---|---|---|---|---|---|---|
| | | | | Mean | Median | Mean | Median |
| MOH National Hospital | 17,664 | 76% | 13,447 | 12.9 | 2.0 | 17.0 | 3.0 |
| MOH Regional Hospital | 19.096 | 56% | 10,779 | 15.7 | 2.0 | 27.9 | 3.0 |
| MOH Area Hospital | 4,945 | 49% | 2,446 | 4.0 | 0.0 | 8.1 | 3.0 |
| IHSS Hospital | 13,588 | 2% | 295 | 4.4 | 0.0 | 200.7 | 300.0 |
| Private Hospital | 17,581 | 89% | 15,682 | 118.0 | 50.0 | 132.3 | 75.0 |
| CESAR | 103,278 | 89% | 91,674 | 2.5 | 2.0 | 2.8 | 2.0 |
| CESAMO | 95,928 | 89% | 85,238 | 2.7 | 2.0 | 3.1 | 2.0 |
| NGO Clinic | 5,939 | 47% | 2,772 | 15.0 | 0.0 | 32.0 | 20.0 |
| Private Physician/Clinic | 159,533 | 94% | 149,766 | 136.6 | 75.0 | 145.5 | 80.0 |
| Traditional Healer | 1,361 | 100% | 1,361 | 18.8 | 10.0 | 18.8 | 10.0 |
| **All** (listed above) | **438,913** | **85%** | **373,460** | **57.1** | **3.0** | **67.5** | **5.0** |
| **All MOH Facilities** | 240,911 | 85% | 203,484 | 4.4 | 2.0 | 5.2 | 2.0 |
| **All Private Physicians, Clinics, and Hospitals** | 177,114 | 94% | 165,689 | 134.7 | 70.0 | 144.0 | 80.0 |

**Figure 22: Proportion of Patients Who Paid for Their Acute Outpatient Care Visit: Comparisons of Private, Commercial, and MOH Patients**



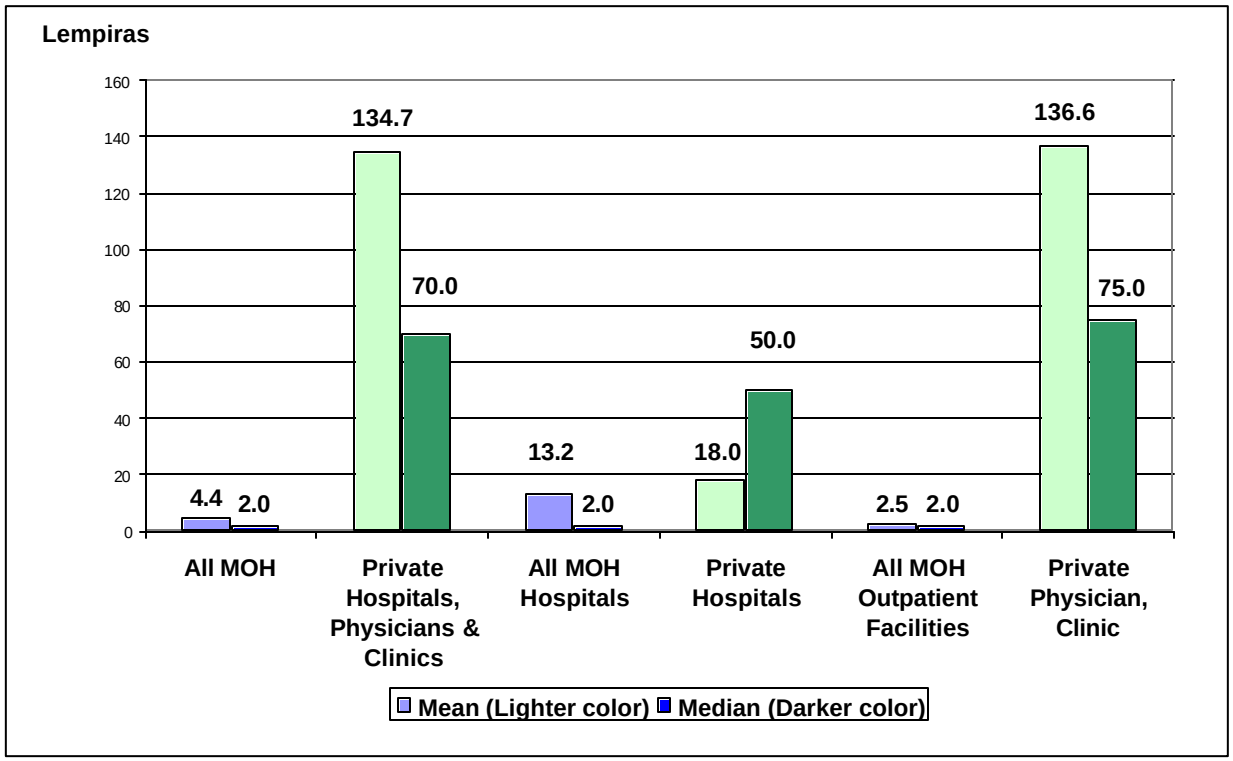

These relative rates of exoneration provide perverse incentives to MOH would-be consumers: they encourage the use of relatively more scarce and more costly hospital ambulatory care vis-à-vis the relatively more abundant and less costly to operate CESAMOs and CESARs, and thereby encourage the inefficient use of MOH resources. The incentives provided to patients also tend to exacerbate congestion at the hospitals, increase the costs of the MOH, and are a factor that has probably contributed to two trends in the use of MOH care: (1) the average number of ambulatory care visits at regional and area hospitals growing 47 percent faster than CESAMOs from 1995 to 1999 (22 percent versus 15 percent, respectively), and (2) the 35 percent increase in the share of all hospital ambulatory care that is provided in the emergency department over the same period. The emergency department's share increased from 23 percent in 1994-1995 to 31 percent in 1997-1998, far in excess of the 10 percent that the Pan American Health Organization has identified as what the maximum should be in a well-functioning health care system (Ubilla, et al., 2000, page 15).

Figure 23 presents comparisons of average prices paid for acute ambulatory care in the private, commercial sector and the MOH. Averaged over all MOH facilities, the mean is 4.4 lempiras and the median is half that at 2.0. These payment levels are low—the equivalent of 0.03 percent of the average per capita income of US$740 in Honduras in 1998 (Population Reference Bureau, 2000).[7] The mean private, commercial sector payment of 134.7 lempiras was more than 30 times the MOH

[7] To provide a benchmark for U.S. citizens, the equivalent cost in 1998, when average per capita income was $29,240, would have been $9.94 a visit.

average of 4.4, and the median was 35 times greater (70.0 and 2.0, respectively). In other words, the MOH average payment is about 3 percent of what is paid in the private sector. When the MOH outpatient facilities—i.e., the CESAMOs and CESARs—are compared with those of private physicians and clinics, the differences are even greater: the private mean patient expenditures is 55 times greater—2.5 and 136.6 lempiras, respectively. The MOH and private, commercial hospital ambulatory patient fees are much more similar, but they also service far fewer patients. Thus, the more extreme differences in average payments for outpatient facilities in the two sectors are far more commonly the sums that are actually paid.

**Figure 23: Average Price Paid for an Acute Outpatient Care Visit: Comparisons of Private, Commercial, and MOH Patients**




The mean price paid by a patient in an MOH hospital is 13.2 lempiras compared to 2.5 lempiras in a CESAR or CESAMO. These relative prices are appropriate in that they motivate consumers to seek care first at the lowest tiers of the Ministry's pyramidal health care referral infrastructure. However, the fact that the median fees paid at the CESAMOs and CESARs are identical to that of the hospitals, combined with the low absolute levels, suggests that there is a need to strengthen the consumer incentives.

### 4.1.1 Purchases of Ancillary Goods and Services for Acute Illness Care

Nearly half of the persons who had an acute health care visit in the past 30 days reported that they were prescribed medicines that needed to be purchased from a place other than where they received their consultation. Of these persons, 86 percent purchased their medicines elsewhere. For 42 percent of the acute care patients, the cost of the consultation was not the full (direct) cost of their care. There are several possibilities as to why patients had to go outside the facilities for services. Less comprehensive types of equipment and supplies are available, especially in the more numerous, lower tiered facilities of the MOH, reflecting the pyramidal referral system of the public health care delivery system. Patients who are diagnosed as requiring a laboratory examination or an x-ray may be told to obtain this service elsewhere because such diagnostic services are not likely to be available in these facilities. This is also likely to be the common experience of patients of private physician practices. Another possibility relates to MOH financing shortfalls. It is commonly reported that in MOH facilities, and particularly in the CESARs and CESAMOs, medicines are restocked once a month and the supplies are generally inadequate and largely depleted well before the next shipment arrives. If this is an accurate portrayal, it is likely that patients would have to obtain prescribed medicines elsewhere because of their unavailability at the MOH facility.

Acute care patients also are instructed to obtain examinations or equipment elsewhere, but this occurs much less frequently, as only 7 percent and 1 percent, respectively, of all acute ambulatory care patients were so instructed.

Table 18 shows the likelihood of patients being prescribed additional medicines, examinations, and equipment elsewhere by type of provider, and the proportion of patients who did so. This practice is much more common in the private, commercial sector where about 70 percent of patients reported that they were prescribed medicines that had to be purchased elsewhere. In contrast, among MOH patients, only about half of this percentage purchased such prescriptions elsewhere.

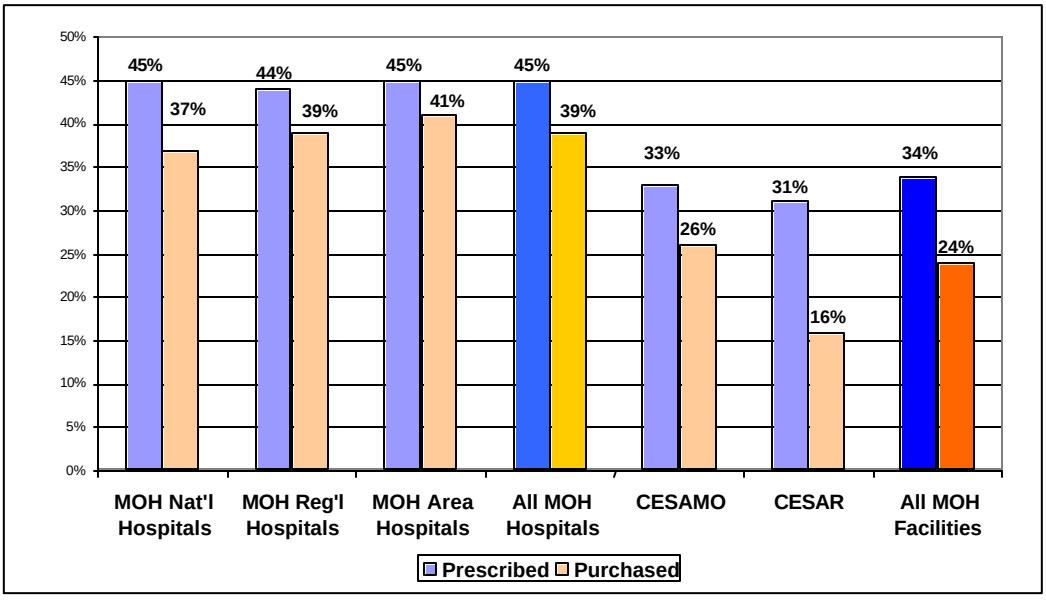
**Table 18: Acute Illness Treatment Patterns: The Likelihood of Being Prescribed Additional Medicines or Examinations to be Obtained from a Location Outside of the Place of the Consultation**

| | | Patient was Prescribed/Purchased | | | Patient Obtained | |
|---|---|---|---|---|---|---|
| Place of Consultation | Number of Persons | Additional Medicines | | | Additional Examinations | |
| | | Medicine was Prescribed | Medicines were Purchased | | Number of All Patients | Percent of All Patients |
| | | | No. & Percent of All Patients | No. & Percent of Those Who were Prescribed | | |
| MOH National Hospital | 17,664 | 8,025<br>45% | 6,573<br>37% | 6,573<br>82% | 3,078 | 17% |
| MOH Regional Hospital | 19,096 | 8,441<br>44% | 7.477<br>39% | 7,447<br>89% | 1,469 | 8% |
| MOH Area Hospital | 4,945 | 2,229<br>45% | 2,004<br>41% | 2,004<br>90% | 687 | 14% |
| IHSS Hospital | 13,588 | 2,820<br>21% | 1,687<br>12% | 1,687<br>60% | 295 | 2% |
| Private Hospital | 17,581 | 12,317 | 12,080 | 12,080 | 1,652 | 9% |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 70% | 69% | 98% | | |
| CESAR | 103,278 | 34,219 | 16,545 | 16,545 | 4,032 | 4% |
| | | 33% | 16% | 48% | | |
| CESAMO | 95,928 | 29,815 | 24,544 | 24,544 | 2,989 | 3% |
| | | 31% | 26% | 82% | | |
| IHSS Clinic | 5,045 | 420 | 329 | 329 | 66 | 1% |
| | | 8% | 7% | 78% | | |
| NGO Clinic | 5,939 | 2,174 | 2,174 | 2,174 | 372 | 6% |
| | | 37% | 37% | 100% | | |
| Private Physician/Clinic | 159,629 | 115,317 | 112,788 | 112,788 | 19,117 | 12% |
| | | 72% | 71% | 98% | | |
| Private Dentist | 3,510 | 491 | 491 | 491 | | |
| | | 14% | 14% | 100% | | |
| Traditional Healer | 1,361 | 234 | 234 | 234 | | |
| | | 17% | 17% | 100% | | |
| Friend/Relative | 3,725 | 1,228 | 1,228 | 1,228 | | |
| | | 33% | 33% | 100% | | |
| **All Sources Listed Above** | **451,289** | **217,730** | **188,154** | **188,154** | **33,757** | **7%** |
| | | **48%** | **42%** | **86%** | | |

As Figure 24 indicates, the patients of the CESARs and CESAMOs are less likely to have additional medicines prescribed and they are less likely to comply with the provider's instructions to purchase them. Whereas about 90 percent of hospital patients so directed follow through and purchase the medicines, the proportion falls to 82 percent of patients in CESAMOs and 48 percent in CESARs. It would seem likely that income or lack of access to an alternative source from which to purchase the items played a role in patients' noncompliance, but this could not be ascertained with available data.

**Figure 24: Proportion of MOH Patients Who Were Prescribed Medicines to Purchase Elsewhere and Who Purchased Them, by Source of Care**



The costs of the items that acutely ill ambulatory patients were directed by their providers to purchase elsewhere is considerable. Using an average based only on those persons who purchased such items, the mean value of medicines purchased elsewhere was 195 lempiras and the mean value of examinations was 109 lempiras.

Table 19 presents the averages disaggregated by type of provider.

**Table 19: Additional Payments for Acute Illness, Outpatient Care: Average Payments for Medicines and Examinations Purchased Elsewhere**

Averaged over only three persons who had an outpatient consultation for an acute illness and paid something for each type of additional item

| Place of Consultation | Cost of Additional Medicines Purchased Elsewhere | | | | Cost of Additional Examinations Purchased Elsewhere | | | |
|---|---|---|---|---|---|---|---|---|
| | No. of Persons | Total Payments | Mean | Median | No. of Persons | Total Payments | Mean | Median |
| MOH National Hospital | 6,573 | 951,850 | 145 | 110 | 3,078 | 111,014 | 36 | 20 |
| MOH Regional Hospital | 7,477 | 636,981 | 85 | 60 | 1,469 | 188,690 | 128 | 90 |
| MOH Area Hospital | 2,004 | 1,406,736 | 702 | 117 | 399 | NSS | NSS | NSS |
| IHSS Hospital | 1,687 | 297,693 | 177 | 125 | 295 | NSS | NSS | NSS |
| Private Hospital | 12,080 | 4,686,001 | 388 | 150 | 1,652 | 53,001 | 32 | 0 |
| CESAR | 16,545 | 1,278,777 | 77 | 42 | 4,032 | 281,163 | 70 | 75 |
| CESAMO | 24,544 | 1.554,187 | 633 | 40 | 2.989 | 172,000 | 58 | 35 |
| IHSS Clinic | 329 | 46,187 | 141 | 80 | 66 | NSS | NSS | NSS |
| NGO Clinic | 2,174 | 106,872 | 49 | 27 | 372 | NSS | NSS | NSS |
| Private Physician/Clinic | 112,788 | 25,502,716 | 226 | 150 | 19,117 | 2,809,540 | 147 | 65 |
| Private Dentist | 491 | 70,253 | 143 | 30 | 0 | 0 | | |
| Traditional Healer | 234 | 4,212 | 18 | 18 | 0 | 0 | | |
| Friend/Relative | 1,228 | 213,391 | 174 | 200 | 0 | 0 | | |
| **Total (all above)** | **188,154** | **36,755,856** | **195** | **100** | **33,469** | **3,657,844** | **109** | **60** |
| **All MOH Facilities** | 57,143 | 5,828,531 | 102 | 50 | 12,255 | 1,070,381 | 87 | 75 |
| **All Private Physicians, Clinics, and Hospitals** | 124,868 | 30,111,541 | 241 | 150 | 20,672 | 2,852,894 | 138 | 60 |

### 4.1.2 Average Total Patient Expenditures for Acute Illness Care

Table 20 presents the component parts of patient payments for acute ambulatory care by type of provider. It also provides an estimate of the average total cost of patient care. According to the table, the mean and median costs of care vary by a factor of six, reflecting the highly skewed distribution of expenditures. Using the mean as the measure of central tendency, the average patient's total cost for care was 155 lempiras. On average, the indirect cost of obtaining care is 12 lempiras, and this constitutes about 8 percent of the total cost of care. The cost of the consultation is generally less than 40 percent of the total treatment cost (i.e., the sum of the consultation cost and the cost of other medicines, examinations, and equipment purchased elsewhere). Even in the private sector where

patient consultation fees are much higher than the MOH's, the average cost of ancillary goods or services purchased elsewhere exceeds the average consultation fee.

**Table 20: Composition of Average Total Patient Costs for Acute Illness Outpatient Care**

| Place of Consultation | Number of Persons | (A) Total Indirect Costs (Transportation, Food & Hotel for Patient and Companion) | | (B) Total Cost for Outpatient Consultation (Paid within Facility where Patient was Treated as an Outpatient) | | (C) Cost of Ancillary Services Purchased Elsewhere (Medicines, Examinations & Equipment Purchased Elsewhere) | | (D) Total Treatment Costs (Consultation + Ancillary Services) | | (E) Total Cost of Care (Treatment plus Indirect Costs = Column A + Column D) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median |
| MOH National Hospital | 17,664 | 23.8 | 8.0 | 12.9 | 2.0 | 60.2 | 0.0 | 73.1 | 5.0 | 96.9 | 30.0 |
| MOH Regional Hospital | 19,096 | 14.8 | 7.5 | 15.7 | 2.0 | 43.2 | 0.0 | 59.0 | 4.0 | 73.8 | 20.0 |
| MOH Area Hospital | 4,945 | 23.4 | 4.0 | 4.0 | 0.0 | 55.3 | 0.0 | 56.5 | 3.0 | 80.1 | 33.0 |
| IHSS Hospital | 13,588 | 13.5 | 3.2 | 4.4 | 0.0 | 21.9 | 0.0 | 26.3 | 0.0 | 39.8 | 4.0 |
| Private Hospital | 17,581 | 34.1 | 10.0 | 118.0 | 50.0 | 269.5 | 130.0 | 387.5 | 180.0 | 421.6 | 190.0 |
| CESAR | 103,278 | 3.2 | 0.0 | 2.5 | 2.0 | 15.1 | 0.0 | 17.6 | 2.0 | 20.8 | 3.0 |
| CESAMO | 95,928 | 4.4 | 0.0 | 2.7 | 2.0 | 18.0 | 0.0 | 20.7 | 2.0 | 25.1 | 3.0 |
| NGO Clinic | 5,939 | 1.9 | 0.0 | 15.0 | 0.0 | 24.8 | 0.0 | 39.8 | 0.0 | 41.7 | 0.0 |
| Private Physician/Clinic | 159,533 | 19.6 | 4.0 | 136.6 | 75.0 | 179.0 | 95.0 | 315.6 | 215.0 | 335.2 | 232.0 |
| Traditional Healer | 1,361 | 13.5 | 20.0 | 18.8 | 10.0 | 3.1 | 0.0 | 21.9 | 10.0 | 35.3 | 30.0 |
| **All*** | **468,620** | **12.1** | **0.0** | **55.3** | **3.0** | **87.6** | **0.0** | **142.9** | **17.5** | **155.0** | **32.0** |
| **Percent** | | **8%** | | **36%** | | **57%** | | **92%** | | **100%** | |
| **All MOH Facilities** | 240,911 | 6.5 | 0 | 4.4 | 2 | 28.6 | 0 | 33.1 | 2 | 39.8 | 4 |
| **All Private Physicians, Clinics and Hospitals** | 177,114 | 21.1 | 5 | 134.7 | 70 | 188 | 100 | 322.7 | 210 | 343.8 | 230 |

* All includes IHSS clinic, private dentist, medicine post, community volunteer, friend or relative and "other", which individually did not have sufficient observations to be statistically significant.

Using the median as the measure of central tendency, the average total cost of care was only 32 lempiras, and the average total treatment cost was only 17.5 lempiras. As already noted, the substantial difference between the mean and median costs is due to the wide variations in expenditures, but also to the fact that fewer than half of the patients purchased ancillary goods or services. Thus the median of this component of costs is zero.

### 4.1.3 Total Treatment Expenditures for Acute Illness Care

Total treatment costs for acute illness, including the consultation fees at the site of care, as well as the cost of any ancillary goods and services purchased elsewhere, totaled 67 million lempiras. Recall that these are total acute care costs individuals reported for their last consultation in the 30-day period prior to being interviewed.

Table 21 shows the composition of total treatment costs by type of provider. Private physician and clinic consultation fees constitute 83 percent of the total. The MOH, which provided 59 percent of all acute outpatient visits, garnered only 6 percent of total consultation fees.

**Table 21: Total Acute Outpatient Care Treatment Costs, by Source of Care**

Total paid for the last visit in the past 30 days, in current Lempiras

| Facility/Provider | Consultation | Ancillary Costs - Purchased Elsewhere | | | Total Treatment Costs |
|---|---|---|---|---|---|
| | | Medicines | Examinations | Equipment | |
| MOH National Hospital | 228,616 | 951,850 | 111,014 | | 1,291,481 |
| MOH Regional Hospital | 1,095,793 | 636,981 | 188,690 | | 1,921,464 |
| MOH Area Hospital | 19,871 | 1,406,736 | 317,514 | | 1,744,120 |
| IHSS Hospital | 59,206 | 297,693 | - | | 356,899 |
| Private Hospital | 2,074,017 | 4,686,001 | 53,001 | | 6,813,019 |
| CESAR | 254,736 | 1,278,777 | 281,163 | | 1,814,676 |
| CESAMO | 262,533 | 1,554,187 | 172,000 | | 1,988,720 |
| Private Physician, Clinic | 24,682,558 | 25,425,540 | 2,799,893 | 330,499 | 53,238,490 |
| Traditional Healer | 25,549 | 4,212 | - | | 29,761 |
| All Others | 900,300 | 517,105 | 42,436 | - | 1,459,841 |
| **All Sources** | **29,603,180** | **36,759,081** | **3,965,711** | **330,499** | **70,658,471** |
| **All MOH Facilities** | 1,861,549 | 5,828,531 | 1,070,381 | - | 8.760,461 |
| | | | | | |
| MOH National Hospital | 1% | 3% | 3% | 0% | 2% |
| MOH Regional Hospital | 4% | 2% | 5% | 0% | 3% |
| MOH Area Hospital | 0% | 4% | 8% | 0% | 2% |
| IHSS Hospital | 0% | 1% | 0% | 0% | 1% |
| Private Hospital | 7% | 13% | 1% | 0% | 10% |
| CESAR | 1% | 3% | 7% | 0% | 3% |
| CESAMO | 1% | 4% | 4% | 0% | 3% |
| Private Physician, Clinic | 83% | 69% | 71% | 100% | 75% |
| Traditional Healer | 0% | 0% | 0% | 0% | 0% |
| All Others | 3% | 1% | 1% | 0% | 2% |
| **All Sources** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **All MOH Facilities** | 6% | 16% | 27% | 0% | 12% |
| | | | | | |
| MOH National Hospital | 18% | 74% | 9% | 0% | 100% |
| MOH Regional Hospital | 57% | 33% | 10% | 0% | 100% |
| MOH Area Hospital | 1% | 81% | 18% | 0% | 100% |
| IHSS Hospital | 17% | 83% | 0% | 0% | 100% |
| Private Hospital | 30% | 69% | 1% | 0% | 100% |
| CESAR | 14% | 70% | 15% | 0% | 100% |
| CESAMO | 13% | 78% | 9% | 0% | 100% |
| Private Physician, Clinic | 46% | 48% | 5% | 1% | 100% |
| Traditional Healer | 86% | 14% | 0% | 0% | 100% |
| All Others | 62% | 35% | 3% | 0% | 100% |
| **All Sources** | **42%** | **52%** | **6%** | **0%** | **100%** |
| **All MOH Facilities** | 21% | 67% | 12% | 0% | 100% |

The high proportion (61 percent) of total payments accounted for by ancillary goods and services purchased from someplace other than the place of care is striking. The high proportion of persons who obtained ancillary services at a different site implies that the treatment of a single illness episode is commonly fragmented in Honduras, and this is likely to have adverse consequences for the quality of care provided. For every one lempira that Hondurans spend for an outpatient visit for treatment of an acute illness, they spend 1.6 lempiras elsewhere for ancillary goods or services. In the case of MOH, for every lempira patients pay in MOH consultation fees, they spend 7.5 lempiras elsewhere for ancillary goods and services. The fact that patients' consultation fees are only a portion—less than half—of the total cost of care is an important characteristic of the way in which health care is obtained in Honduras. This must be born in mind when considering MOH user fee levels, as it has important evaluation and monitoring implications.

It is likely that the initial impact of increasing MOH user fees would be to reduce the proportion of persons who are prescribed medicines and examinations that are to be purchased elsewhere and who comply by purchasing the prescribed items. This impact would not be revealed, however, by tracking changes in utilization, yet it is likely that this impact may be significant in reducing access to, and the quality of, care.

## 4.2 Patient Expenditures for Ambulatory Care for Chronic Illness

Of those individuals who reported having a visit for chronic care, 59 percent paid for the visit. Persons who obtained an ambulatory care visit for a chronic illness paid a mean of 108 lempiras and a median of 2.0 lempiras. When those persons who did not pay for their care (41 percent) are excluded from the calculation, the mean payment level jumps to 182 lempiras and the median increases dramatically to 40 lempiras.

Table 22 presents payment data for chronic illness care by type of provider. Nearly one-quarter of the persons with a chronic illness visit did not respond to the question about the source of their care. A comparison of the payments made to the nine individual provider types identified in Table 22 with the payments made to these same provider types for acute care (refer back to Table 17) reveals that, although slightly more chronically ill persons are exempted from payment, the average payment is two to three times higher for chronic care than it is for acute illness. Although the average level of fees is different, variations in fees for chronic illness care across provider types are very similar to those observed for acute illness care. IHSS patients were the least likely to pay anything for their care (2 percent), and patients of private physicians and clinics were the most likely to have paid (93 percent) for their care. Surprisingly, patients of CESAMOs (92 percent) were more likely to have paid for their care than patients of private hospitals (90 percent).

**Table 22: Outpatient Chronic Care Expenditures: Average Consultation Fee per Patient**

| Place of Consultation | All Patients | Percent Who Paid Something | Number Who Paid Something | Average Consultation Cost of All Patients | | Average Consultation Costs of Only Those Who Paid Something | |
|---|---|---|---|---|---|---|---|
| | | | | Mean | Median | Mean | Median |
| MOH National Hospital | 30,044 | 69% | 20,861 | 42.2 | 2.0 | 60.7 | 5.0 |
| MOH Regional Hospital | 20,168 | 61% | 12,219 | 10.4 | 2.0 | 17.1 | 3.0 |
| MOH Area Hospital | 2,744 | 60% | 1.640 | 4.8 | 2.0 | 8.1 | 2.0 |
| IHSS Hospital | 8.163 | 2% | 145 | NSS | NSS | NSS | NSS |
| Private Hospital | 8,533 | 90% | 7,648 | 458.6 | 150.0 | 511.6 | 250.0 |
| CESAR | 31,477 | 82% | 25,280 | 5.3 | 2.0 | 6.4 | 2.0 |
| CESAMO | 20,524 | 92% | 18,843 | 12.3 | 2.0 | 13.4 | 2.0 |
| Private Physician/Clinic | 87,117 | 93% | 80,740 | 292.8 | 100.0 | 315.9 | 120.0 |
| Traditional Healer | 3,805 | 75% | 2,845 | 68.9 | 20.0 | 92.2 | 35.0 |
| **All Sources Identified Above** | **212,575** | **80%** | **170,761** | **148.8** | **5.0** | **185.5** | **40.0** |
| **All Sources** | **298,851** | **59%** | **176,841** | **108.0** | **2.0** | **182.4** | **40.0** |
| **All MOH Facilities** | 104,957 | 77% | 80,474 | 18.2 | 2.0 | 23.7 | 2.0 |
| **All Private Physicians, Clinics and Hospitals** | 95,650 | 92% | 88,182 | 307.5 | 120.0 | 333.1 | 140.0 |

Total includes those of less used sources and 70,692 who did not answer the source of care question.

Figure 25 shows the proportion of private and MOH patients who paid for their care. Overall, 76 percent of MOH patients paid for their care, compared to 92 percent of the patients of private physicians, clinics, and hospitals. The mean fee paid for an MOH visit was 18 and the median was 2. The mean MOH payment was 6 percent and the median was less than 2 percent of the corresponding private sector average payments. These relative payment levels are roughly on the same order of what was observed for acute care visits.

**Figure 25: Proportion of Patients Who Paid for Their Chronic Outpatient Care Visit: Comparisons of Private Providers and the MOH**

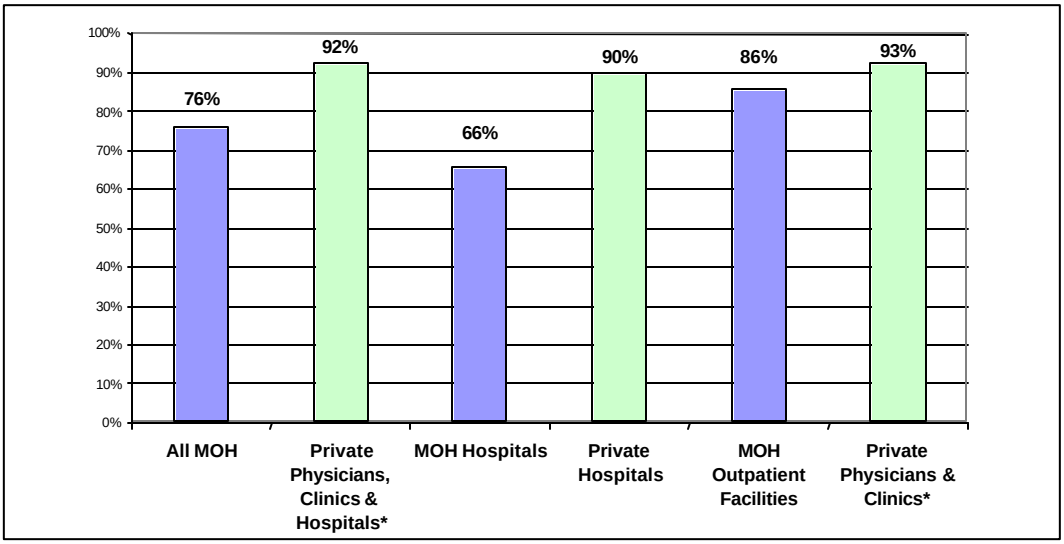
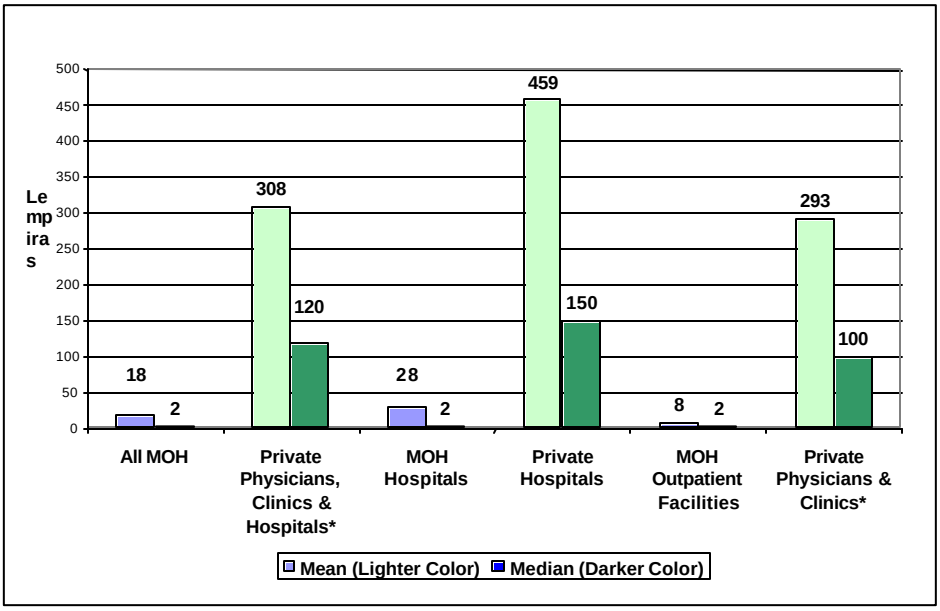


Figure 26 shows comparisons of average payments made to MOH hospitals, private hospitals, and non-hospital facilities for chronic illness outpatient care. The structure of exonerations within MOH facilities parallels that of acute care and provides an even greater incentive for patients to use the MOH pyramidal referral network for chronic care, in the reverse order of what is intended. When compared with patients at CESAMOs and CESARs, persons obtaining care for chronic illness at an MOH hospital were two-and-a-half times less likely to have not paid anything for their care. The mean fee paid at MOH hospitals, however, was three-and-one-half times higher than that paid at CESAMOs and CESARs, although the medians were both 2.0. When including only those who paid something for their care, the mean payment at MOH hospitals was six times greater than payment at CESAMOs and CESARs, and the median at MOH hospitals was 3 lempiras, compared to 2 lempiras. As judged by the median, MOH patients are not motivated by financial considerations to use the lower tiers of care first.

**Figure 26: Average Price Paid for a Chronic Outpatient Care Visit: Comparisons of Private Providers and the MOH**




### 4.2.1 Purchases of Ancillary Goods and Services for Chronic Illness

About 40 percent of all persons who had an ambulatory care visit for a chronic illness in the past three months reported that they were prescribed medicines to be purchased at someplace other than where they received their consultation and that they had done so. This is roughly the same proportion of patients who had an acute illness and purchased medicines elsewhere. A substantially larger proportion of the chronically ill also purchased ancillary examinations.

Table 23 shows the proportion of chronically ill patients who purchased medicines and examinations elsewhere, divided by nine different sectors of care. The private hospitals and physicians and clinics had the highest percentages of patients who purchased medicines (61 and 76

percent, respectively) and examinations (31 and 26 percent, respectively) elsewhere. While MOH patients are much less likely to do so, nearly one-third of all MOH patients reported purchasing medicines elsewhere and about 5 percent bought diagnostic tests elsewhere.

**Table 23: Chronic Illness Treatment Costs: The Likelihood of Making Payments for Medicines or Examinations Prescribed by the Provider But Obtained Elsewhere***

| Place of Consultation | Number of Persons | Patients Who Made Additional Payments for: | | Patients Who Made Additional Payments for: | |
|---|---|---|---|---|---|
| | | Medicines | | Examinations | |
| | | Number | Percent | Number | Percent |
| MOH National Hospital | 30,044 | 10,166 | 34% | 3,398 | 11% |
| MOH Regional Hospital | 20,168 | 6,837 | 34% | 2,068 | 10% |
| MOH Area Hospital | 2.744 | 1,618 | 59% | 163 | 6% |
| IHSS Hospital | 8,163 | 1,770 | 22% | 456 | 6% |
| Private Hospital | 8,533 | 5,235 | 61% | 2,678 | 31% |
| CESAR | 31,477 | 12,358 | 39% | 338 | 1% |
| CESAMO | 20,524 | 4,360 | 21% | 1,624 | 8% |
| Private Physician/Clinic | 87,117 | 66,204 | 76% | 22,850 | 26% |
| Traditional Healer | 3,805 | 2,268 | 60% | 188 | 5% |
| **All Sources Listed Above** | **212,575** | **110,816** | **52%** | **33,763** | **16%** |
| **All Sources**** | **299,645** | **115,108** | **38%** | **34,427** | **11%** |
| **All MOH Facilities** | 104,957 | 35,481 | 34% | 7,906 | 8% |
| **All Private Physicians, Clinics and Hospitals** | 95,650 | 71,528 | 75% | 25,527 | 27% |

* Obtained by the patient from a place other than where the consultation took place.
** All Sources includes persons who visited other sources and those did not identify a source of chronic care.

The chronically ill spent about twice as much on medicines and examinations as did the acutely ill. The chronically ill spent a mean of 375 lempiras on medicines and 291 on examinations, although only 20 percent of those who purchased one or the other bought both.

Table 24 shows the breakdown by the same nine sources of care. As was the case with acute care, patients of private hospitals and physicians and clinics are more likely to obtain ancillary goods and services and, on average, will pay significantly more for them. The overall MOH mean payments were 173 lempiras for medicines and 138 for examinations, which were both about 40 percent of the private sector averages. Thus the private patient's total treatment costs are much higher than those of an MOH patient, because their consultation fees are higher, the probability of being prescribed and purchasing ancillary goods and services off site is higher, and their payments for ancillary goods and services purchased off site are much higher. This suggests that the financial incentives to not enter the private sector are much greater than would appear to be the case from a review of only the relative user fee levels.

**Table 24: Additional Payments for Chronic Illness, Outpatient Care, Average Payments for Medicines and Examinations Purchased Elsewhere**

Averaged Over Only Those Persons Who Had an Outpatient Consultation for a Chronic Illness and Paid Something for each Type of Additional Item

| Place of Consultation | Cost of Additional Medicines Purchased Elsewhere | | | Cost of Additional Examinations Purchased Elsewhere | | |
|---|---|---|---|---|---|---|
| | No. of Persons | Mean | Median | No. of Persons | Mean | Median |
| MOH National Hospital | 10,166 | 292 | 225 | 3,398 | 126* | 80 |
| MOH Regional Hospital | 6,837 | 203 | 160 | 2,068 | 273 | 60 |
| MOH Area Hospital | 1,618 | 172 | 75 | 163 | 5 | 5 |
| IHSS Hospital | 1,770 | 237 | 85 | 456 | 52 | 21 |
| Private Hospital | 5,235 | 486 | 350 | 2,678 | 394 | 240 |
| CESAR | 12,358 | 84 | 45 | 338 | 19 | 10 |
| CESAMO | 4,360 | 97 | 55 | 1,624 | 31 | 11 |
| Private Physician/Clinic | 66,204 | 479 | 300 | 22,850 | 327 | 150 |
| Traditional Healer | 2,268 | 592 | 600 | 188 | 180 | 180 |
| **All Identified Above** | **110,816** | **380** | **215** | **33,763** | **286**** | **120** |
| **All Sources** | 115,108 | 375 | 200 | 34,427 | 291** | 120 |
| **All MOH Facilities** | 35,481 | 36 | 2 | 7,906 | 5 | 1 |
| **All Private Physicians, Clinic and Hospitals** | 71,528 | 329 | 100 | 25,527 | 511 | 200 |

* Excludes one person who was treated at a national hospital and then paid 201,235 lempiras for an additional examination elsewhere. Including this outlier results in a national hospital mean of 7,827.
** Excludes the outlier identified in the preceding footnote. Including it results in a mean of 1,336.

### 4.2.2 Average Total Patient Expenditures for Chronic Illness

The average total costs for treatment of a chronic illness were much higher than for an acute illness. The mean chronic illness cost was 315 lempiras, twice the acute mean cost, and the median chronic treatment cost was 45 lempiras, which is 41 percent greater than acute treatment.

Table 25 presents the average total costs disaggregated by cost component and type of provider. Just as with acute illness care, the consultation cost for chronic care was less than expenditures for ancillary goods and services, and consultation fees were roughly 40 percent of the total treatment costs. Average indirect costs for chronic care were relatively insignificant at only 9 percent of average total costs, compared to 8 percent for acute illness care.

**Table 25: Composition of Average Total Patient Costs for a Chronic Illness Outpatient Care Visit**

| Place of Consultation | (A) Total Indirect Costs (Transportation, Food & Hotel for Patient and Companion) | | (B) Total Cost for Outpatient Consultation (Paid within Facility where Patient was Treated as an Outpatient) | | (C) Cost of Ancillary Services Purchased Elsewhere (Medicines, Examinations & Equipment Purchased Elsewhere) | | (D) Total Treatment Costs (Consultation + Ancillary services) | | (E) Total Cost of Care (Treatment plus Indirect Costs = Column A + Column D) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** |
| MOH National Hospital | 63 | 30 | 42 | 2 | 114 | 0 | 157 | 5 | 220 | 80 |
| MOH Regional Hospital | 46 | 20 | 10 | 2 | 110 | 0 | 120 | 4 | 166 | 68 |
| MOH Area Hospital | 53 | 20 | 5 | 2 | 102 | 75 | 107 | 77 | 159 | 87 |
| IHSS Hospital | 15 | 6 | NSS | NSS | 54 | 0 | 66 | 0 | 81 | 12 |
| Private Hospital | 61 | 25 | 459 | 150 | 427 | 240 | 886 | 500 | 947 | 550 |
| CESAR | 4 | 0 | 5 | 2 | 33 | 0 | 39 | 2 | 43 | 7 |
| CESAMO | 7 | 0 | 12 | 2 | 23 | 0 | 35 | 2 | 42 | 7 |
| Private Physician/Clinic | 38 | 12 | 293 | 100 | 453 | 220 | 745 | 360 | 784 | 380 |
| Traditional Healer | 41 | 50 | 69 | 20 | 365 | 400 | 433 | 400 | 474 | 488 |
| **All Idebtified Above** | **27** | **2** | **108** | **2** | **179** | **0** | **287** | **12** | **315** | **45** |
| **All Sources** | **35** | **8** | **149** | **5** | **246** | **35** | **395** | **110** | **430** | **150** |
| **All MOH Facilities** | 31 | 5 | 18 | 2 | 71 | 0 | 89 | 4 | 120 | 23 |
| **All Private Physicians, Clinics and Hospitals** | 40 | 15 | 308 | 120 | 450 | 235 | 758 | 362 | 798 | 382 |

### 4.2.3 Total Expenditures for the Treatment of Chronic Illness

As Table 26 shows, treatment costs reported by individuals for their last visit in the past three months to treat chronic illness totaled 86 million lempiras. Private physician and clinics accounted for 74 percent of the total consultation fees paid, and payments to private hospitals represented another 12 percent. The MOH, which provided 46 percent of all chronic illness care, garnered only 6 percent of total consultation fees. More than 70 percent of MOH user fee revenues were paid to the hospitals, with a disproportionate share paid to the national hospitals. This reflects the higher mean fees of both the hospitals and especially the national hospitals. It also reflects the fact that these hospitals provide a much greater proportionate share of the MOH's chronic illness treatment, for which patients pay relatively higher fee levels than they do for acute illness treatment. About half of the MOH chronic ambulatory illness care was provided by the hospitals, with the CESARs and CESAMOs accounting for the other half.

**Table 26: Total Chronic Outpatient Care Treatment Fees, by Source of Care**

(Total paid for the last visit in the past three months, in current Lempiras)

| Strata | Consultation | Ancillary Costs - Purchased Elsewhere | | | Total Treatment Costs |
|---|---|---|---|---|---|
| | | Medicines | Examinations | Equipment | |
| MOH National Hospital | 1,266,956 | 2,966,950 | 429,140 | 938 | 4,663,984 |
| MOH Regional Hospital | 208,909 | 1,387,704 | 564,192 | 259,673 | 2,420,479 |
| MOH Area Hospital | 13,231 | 278,863 | 814 | - | 292,907 |
| IHSS Hospital | 97,841 | 418,969 | 23,930 | - | 540,740 |
| Private Hospital | 3,912,784 | 2,542,722 | 1,054,024 | 48,924 | 7,558,453 |
| CESAR | 166,167 | 1,042,960 | 6,537 | - | 1,215,664 |
| CESAMO | 251,732 | 421,573 | 50,020 | - | 723,325 |
| Private Physician, Clinic | 25,503,713 | 31,704,809 | 7,478,008 | 256,477 | 64,943,006 |
| Traditional Healer | 262,186 | 1,342,402 | 33,815 | 10,896 | 1,649,299 |
| Other | 579,131 | 1,063,030 | 334,068 | - | 1,976,229 |
| **All Sources** | **32,262,651** | **43,169,981** | **9,974,546** | **576,908** | **85,984,085** |
| **All MOH Facilities** | 1,906,995 | 6,098,050 | 1,050,702 | 260,612 | 9,316,359 |
| | | | | | |
| MOH National Hospital | 4% | 7% | 4% | 0% | 5% |
| MOH Regional Hospital | 1% | 3% | 6% | 45% | 3% |
| MOH Area Hospital | 0% | 1% | 0% | 0% | 0% |
| IHSS Hospital | 0% | 1% | 0% | 0% | 1% |
| Private Hospital | 12% | 6% | 11% | 8% | 9% |
| CESAR | 1% | 2% | 0% | 0% | 1% |
| CESAMO | 1% | 1% | 1% | 0% | 1% |
| Private Physician, Clinic | 79% | 73% | 75% | 44% | 76% |
| Traditional Healer | 1% | 3% | 0% | 2% | 2% |
| Other | 2% | 2% | 3% | 0% | 2% |
| **All Sources** | **100%** | **100%** | **100%** | **100%** | **100%** |
| **All MOH Facilities** | 6% | 14% | 11% | 45% | 11% |
| | | | | | |
| MOH National Hospital | 27% | 64% | 9% | 0% | 100% |
| MOH Regional Hospital | 9% | 57% | 23% | 11% | 100% |
| MOH Area Hospital | 5% | 95% | 0% | 0% | 100% |
| IHSS Hospital | 18% | 77% | 4% | 0% | 100% |
| Private Hospital | 52% | 34% | 14% | 1% | 100% |
| CESAR | 14% | 86% | 1% | 0% | 100% |
| CESAMO | 35% | 58% | 7% | 0% | 100% |
| Private Physician, Clinic | 39% | 49% | 12% | 0% | 100% |
| Traditional Healer | 16% | 81% | 2% | 1% | 100% |
| Other | 29% | 54% | 17% | 0% | 100% |
| **All Sources** | **38%** | **50%** | **12%** | **1%** | **100%** |
| **All MOH Facilities** | 20% | 65% | 11% | 3% | 100% |

## 4.3 Patient Expenditures on Preventive Care

Eighty-nine percent of all preventive care was provided free of charge.

Table 27 presents fee payment data by type of provider or facility. Although 79 percent of private hospital and physician and clinic patients paid for preventive services, the vast majority of such care was provided by the MOH and especially the CESAMOs and CESARs, both of which charged fewer than 10 percent of their preventive care patients. The mean payment was 10 lempiras and ranged from a mean of zero for CESARs, CESAMOs, and IHSS facilities, to an average of 162 lempiras for private hospitals, physicians, and clinics. The overall mean MOH fee was 0.5 lempiras, and when the denominator includes only those who paid something for their care, the mean was 6 lempiras.

**Table 27: Preventive Outpatient Care Expenditures, Average Consultation Fees per Patient**

(in current Lempiras)

| Place of Consultation | All Patients | Percent Who Paid Something | Number Who Paid Something | Average Consultation Cost of All Patients | | Average Consultation Costs of Only Those Who Paid Something | |
|---|---|---|---|---|---|---|---|
| | | | | Mean | Median | Mean | Median |
| MOH National Hospital | 23,651 | 11% | 2,608 | 2 | 0 | 16 | 3 |
| MOH Regional Hospital | 24,095 | 2% | 575 | 2 | 0 | 89 | 150 |
| MOH Area Hospital | 10,686 | 22% | 2,303 | 2 | 0 | 10 | 5 |
| IHSS Hospital | 7,084 | 0% | 0 | 0 | 0 | | |
| Private Hospital | 8,789 | 78% | 6,876 | 185 | 100 | 237 | 100 |
| CESAR | 246,759 | 9% | 21,015 | 0 | 0 | 5 | 2 |
| CESAMO | 240,153 | 7% | 16,961 | 0 | 0 | 3 | 2 |
| IHSS Clinic | 5.497 | 0% | 0 | 0 | 0 | | |
| NGO Clinic | 1,092 | 58% | 630 | 67 | 3 | 115 | 88 |
| Private Physician/Clinic | 27,866 | 80% | 22,217 | 155 | 80 | 194 | 100 |
| Private Dentists | 1,323 | 61% | 808 | 773 | 180 | 1266 | 1000 |
| Community Volunteer | 30,582 | 0% | 111 | 0 | 0 | 3 | 3 |
| Friend/Relative | 1,036 | 0% | 0 | 0 | 0 | 0 | 0 |
| **All Sources** | **698,543** | **11%** | **74,534** | **10** | **0** | **98** | **5.0** |

Four preventive services—family planning, immunizations, prenatal care, and growth and development—were included in the survey's closed-ended list of preventive services that the MOH mandates its facilities to provide free of charge. These specific services are only a subset of all the preventive services reported here, but in MOH facilities, 76 percent of persons who reported they had one or more preventive service in the past three months had one or more of these four MOH priority services. Contrary to the MOH mandate, many interviewees reported they had paid for these services. More specifically, 36,000 persons (7 percent) of the 515,593 persons who reported obtaining one or more of these four services from the MOH in the previous three months had paid for them. Contrary to MOH policy, fees were charged for the following:

- All of the 1,176 family planning visits provided in CESARs and CESAMOs
- 77 percent of the prenatal care visits provided in CESARs
- 46 percent of the prenatal care visits provided in CESAMOs
- 45 percent of the growth and development visits provided in CESARs and CESAMOs
- 4 percent of immunizations provided in CESARs
- 3 percent of immunizations provided in CESAMOs
- 10 percent of immunizations provided in national hospitals.

With the exception of immunizations, substantial shares of MOH patients are being charged for these services. This may, in part, explain their low levels of provision and coverage. (The MOH needs to do a better job of communicating and monitoring its free care, priority services.

### 4.3.1 Purchases of Ancillary Goods and Services for Preventive Care

Preventive care patients were far less likely than curative care patients to have been prescribed ancillary goods or services to be obtained elsewhere. Patients were usually prescribed medicines, but this occurred for less than 5 percent of patients. As was found in the curative care analysis, the private hospital and physicians and clinics were more likely to prescribe ancillary goods and services for preventive care, and those goods purchased were considerably more expensive.

As may be seen in Table 28, while the mean average total cost of ancillary goods and services was 12 lempiras, in the private sector it was 190. The large mean outlays for these additional items by the private sector patients pulls the overall mean of 12 lempiras above the overall mean consultation fee of 10 lempiras. Still, compared with curative care, a much larger fraction of the total treatment costs for preventive care is comprised of consultation fees.

**Table 28: Composition of Average Total Patient Costs for a Preventive Outpatient Care Visit**

(in current Lempiras)

| Place of Consultation | (A) Total Indirect Costs (Transportation, Food & Hotel for Patient and Companion) | | (B) Total Cost for Outpatient Consultation (Paid within Facility where Patient was Treated as an Outpatient) | | (C) Cost of Ancillary Services Purchased Elsewhere (Medicines, Examinations & Equipment Purchased Elsewhere) | | (D) Total Treatment Costs (Consultation + Ancillary services) | | (E) Total Cost of Care (Treatment plus Indirect Costs = Column A + Column D) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** |
| MOH National Hospital | 5 | 0 | 2 | 0 | 5 | 0 | 7 | 0 | 12 | 0 |
| MOH Regional Hospital | 5 | 0 | 2 | 0 | 12 | 0 | 14 | 0 | 20 | 0 |
| MOH Area Hospital | 9 | 0 | 2 | 0 | 12 | 0 | 14 | 0 | 23 | 0 |
| IHSS Hospital | 12 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 13 | 3 |
| Private Hospital | 28 | 30 | 185 | 100 | 191 | 0 | 376 | 270 | 404 | 275 |
| CESAR | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |
| CESAMO | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 |
| IHSS Clinic | 18 | 6 | 0 | 0 | 6 | 0 | 6 | 0 | 24 | 6 |
| NGO Clinic | 6 | 0 | 67 | 3 | 71 | 0 | 137 | 3 | 144 | 3 |
| Private Physician, Clinic | 21 | 10 | 155 | 80 | 190 | 62 | 344 | 200 | 365 | 222 |
| Private Dentist | 8 | 10 | 773 | 180 | 0 | 0 | 773 | 180 | 781 | 180 |
| Community Volunteer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Friend/Relative | 1 | 0 | 0 | 0 | 72 | 0 | 72 | 0 | 73 | 0 |
| **All Sources** | **4** | **0** | **10** | **0** | **12** | **0** | **22** | **0** | **26** | **0** |
| **All MOH Facilities** | **14%** | | **40%** | | **46%** | | **86%** | | **100%** | |

### 4.3.2 Average Total Patient Expenditures for Preventive Care

The monetary costs of preventive care are much less than that of curative care. The median of each of the three component costs of the average total cost of care—indirect, consultation, and ancillary goods and services—was zero. The mean average total cost of a preventive visit for the health sector overall was 26 lempiras. In MOH facilities it was 4.9, and only 10 percent of the total was comprised of the consultation fee—the only portion levied by the MOH and thus under its control.

### 4.3.3 Total Expenditures for the Treatment of Preventive Care

Patient payments for the last preventive care service obtained in the past three months total 15.4 million lempiras.

Table 29 shows the breakdown by type of facility or provider. Although private hospitals, physicians, and clinics have a small share of the preventive services market, they average much higher consultation fees, which resulted in their accounting for more than 80 percent of total consultation fees. The CESAMOs and CESARs provided preventive services to 70 percent of persons who had at least one preventive visit in the previous three months, but they generated only 2

percent of total consultation fees because most of the preventive care they provided—most importantly (numerically), immunizations—were provided free of charge.

**Table 29: Total Preventive Outpatient Care Treatment Fees by Source of Care**
(Total paid for the last visit in the past three months, in current Lempiras)

| Source of Care | Consultation | Ancillary Costs-Purchased Elsewhere | | | Total Treatment Costs |
|---|---|---|---|---|---|
| | | Medicines | Examinations | Equipment | |
| MOH National Hospital | 41,629 | 60,267 | 55,254 | 0 | 157,150 |
| MOH Regional Hospital | 51,100 | 241,209 | 0 | 52,077 | 344,386 |
| MOH Area Hospital | 21,944 | 124,632 | 0 | 0 | 146,576 |
| IHSS Hospital | 0 | 3,231 | 4,644 | 0 | 7,875 |
| Private Hospital | 1,628,040 | 1,379,384 | 1,612 | 294,480 | 3,303,515 |
| CESAR | 108,518 | 41,070 | 2,109 | 0 | 151,698 |
| CESAMO | 43,720 | 268,596 | 2,630 | 44,191 | 359,138 |
| IHSS Clinic | 0 | 33,825 | 0 | 0 | 33,825 |
| NGO Clinic | 72,642 | 68,928 | 8,303 | 0 | 149,873 |
| Private Physician, Clinic | 4,313,760 | 4,210,006 | 817,464 | 257,670 | 9,598,900 |
| Private dentist | 1,023,151 | 0 | 0 | 0 | 1,023,151 |
| Community Volunteer | 334 | 344 | 0 | 0 | 679 |
| Friend/Relative | 0 | 74,310 | 0 | 0 | 74,310 |
| All Other | 13,340 | 38,698 | 0 | 0 | 52,038 |
| **All Sources** | **7,318,177** | **6,544,501** | **892,016** | **648,418** | **15,403,113** |
| | | | | | |
| MOH National Hospital | 1% | 1% | 6% | 0% | 1% |
| MOH Regional Hospital | 1% | 4% | 0% | 8% | 2% |
| MOH Area Hospital | 0% | 2% | 0% | 0% | 1% |
| IHSS Hospital | 0% | 0% | 1% | 0% | 0% |
| Private Hospital | 22% | 21% | 0% | 45% | 21% |
| CESAR | 1% | 1% | 0% | 0% | 1% |
| CESAMO | 1% | 4% | 0% | 7% | 2% |
| IHSS Clinic | 0% | 1% | 0% | 0% | 0% |
| NGO Clinic | 1% | 1% | 1% | 0% | 1% |
| Private Physician, Clinic | 59% | 64% | 92% | 40% | 62% |
| Private dentist | 14% | 0% | 0% | 0% | 7% |
| Community Volunteer | 0% | 0% | 0% | 0% | 0% |
| Friend/Relative | 0% | 1% | 0% | 0% | 0% |
| All Other | 0% | 1% | 0% | 0% | 0% |
| **All Sources** | **100%** | **100%** | **100%** | **100%** | **100%** |
| | | | | | |
| MOH National Hospital | 26% | 38% | 35% | 0% | 100% |
| MOH Regional Hospital | 15% | 70% | 0% | 15% | 100% |
| MOH Area Hospital | 15% | 85% | 0% | 0% | 100% |
| IHSS Hospital | 0% | 41% | 59% | 0% | 100% |

| | | | | | |
|---|---|---|---|---|---|
| Private Hospital | 49% | 42% | 0% | 9% | 100% |
| CESAR | 72% | 27% | 1% | 0% | 100% |
| CESAMO | 12% | 75% | 1% | 12% | 100% |
| IHSS Clinic | 0% | 100% | 0% | 0% | 100% |
| NGO Clinic | 48% | 46% | 6% | 0% | 100% |
| Private Physician, Clinic | 45% | 44% | 9% | 3% | 100% |
| Private dentist | 100% | 0% | 0% | 0% | 100% |
| Community Volunteer | 49% | 51% | 0% | 0% | 100% |
| Friend/Relative | 0% | 100% | 0% | 0% | 100% |
| All Other | 26% | 74% | 0% | 0% | 100% |
| **All Sources** | **48%** | **42%** | **6%** | **4%** | **100%** |

## 4.4 Patient Expenditures for Hospitalization

Persons who reported that they were hospitalized in the past year were asked if they had paid something to the hospital for their stay and whether they had made any additional payment for this hospitalization, such as to a physician. In addition, they were asked the same three sets of questions concerning whether they had been prescribed, or had purchased from off-site sources, any medicines; x-ray, laboratory, or other examinations; or equipment or other supplies from elsewhere. In MOH hospitals, patients generally pay a single hospital bill. Extra payments may be made for follow-up work; or such payments may be a reflection of hospitals having different paying arrangements and administrative systems for some services, such as lab or x-ray exams; or they may be illegal payments made to physicians, for example, for extraordinary or preferential service.

One-third of the persons who were hospitalized in the past year paid no hospitalization fee, and 92 percent reported not having any additional payments related to the stay. A small portion of those who paid nothing to the hospital did pay something for the hospitalization (e.g., to a physician). The proportion of persons who paid nothing for their hospitalization—either to the hospital or to a physician—was 30 percent.

Table 30 presents payment/nonpayment status disaggregated by the type of hospital. As is readily evident, the general findings about hospitalization in Honduras are dominated by the MOH, where 72 percent of the persons who were hospitalized obtained their care. The sector-wide averages reported in Table 30 were virtually the same for the MOH hospitals. A surprisingly large proportion (10 percent) of persons who obtained their care from a private hospital said they received the care free of charge.

**Table 30: Patients' In-hospital Costs: The Likelihood of Paying for Hospitalization and Other In-hospital Services, by Type of Hospital**

(In current Lempiras)

| Type of Hospital | Number of Patients | (A) Patient or Someone Paid Something for the Hospitalization? | | (B) Were Any Additional Payments Made for the Hospitalization? (e.g., to the physician?) | | (C) Made Any In-Hospital Payments? (A or B?) | |
|---|---|---|---|---|---|---|---|
| | | No | Yes | No | Yes | No | Yes |
| MOH National | 63,862 | 23,325 | 40,537 | 60,324 | 3,538 | 22,399 | 41,463 |
| | | 37% | 63% | 94% | 6% | 35% | 65% |
| MOH Regional | 66,902 | 18,613 | 48,289 | 63,173 | 3,729 | 18,201 | 48,701 |
| | | 28% | 72% | 94% | 6% | 27% | 73% |
| MOH Area | 16,689 | 5,281 | 11,408 | 14,080 | 2,609 | 5,281 | 11,408 |
| | | 32% | 68% | 84% | 16% | 32% | 68% |
| **All MOH Hospitals** | **147,453** | **47,219** | **100,234** | **137,577** | **9,876** | **45,881** | **101,572** |
| | | **32%** | **68%** | **93%** | **7%** | **31%** | **69%** |
| Private | 40,081 | 3,857 | 36,224 | 34,357 | 5,724 | 2,883 | 37,198 |
| | | 10% | 90% | 86% | 14% | 7% | 93% |
| IHSS | 14,090 | 13,585 | 505 | 13,149 | 941 | 12,644 | 1,446 |
| | | 96% | 4% | 93% | 7% | 90% | 10% |
| Other | 3,422 | 838 | 2,584 | 3,012 | 410 | 838 | 2,584 |
| | | 24% | 76% | 88% | 12% | 24% | 76% |
| Armed Forces | 1,383 | 286 | 1,097 | - | 1,383 | 286 | 1,097 |
| | | 21% | 79% | 0% | 100% | 21% | 79% |
| **All** | **206,429** | **65,785** | **140,644** | **189,478** | **16,951** | **62,532** | **143,897** |
| | | **32%** | **68%** | **92%** | **8%** | **30%** | **70%** |

The average payments for a hospitalization varied markedly. The overall mean was 2,200 lempiras, with a median of 50. When the denominator is restricted to only persons who paid something for their care, the mean was 3,228 lempiras and the median was 100. Two individuals had extraordinarily high payment levels for their private hospital care.

As may be seen in Table 31, when the payments made by the two individuals are excluded from the analysis, the mean payment levels drop significantly, by about half, for both the private hospital average and the all-hospitals' average.

**Table 31: Patients' In-Hospital Costs, Average Payments by Type of Hospital**

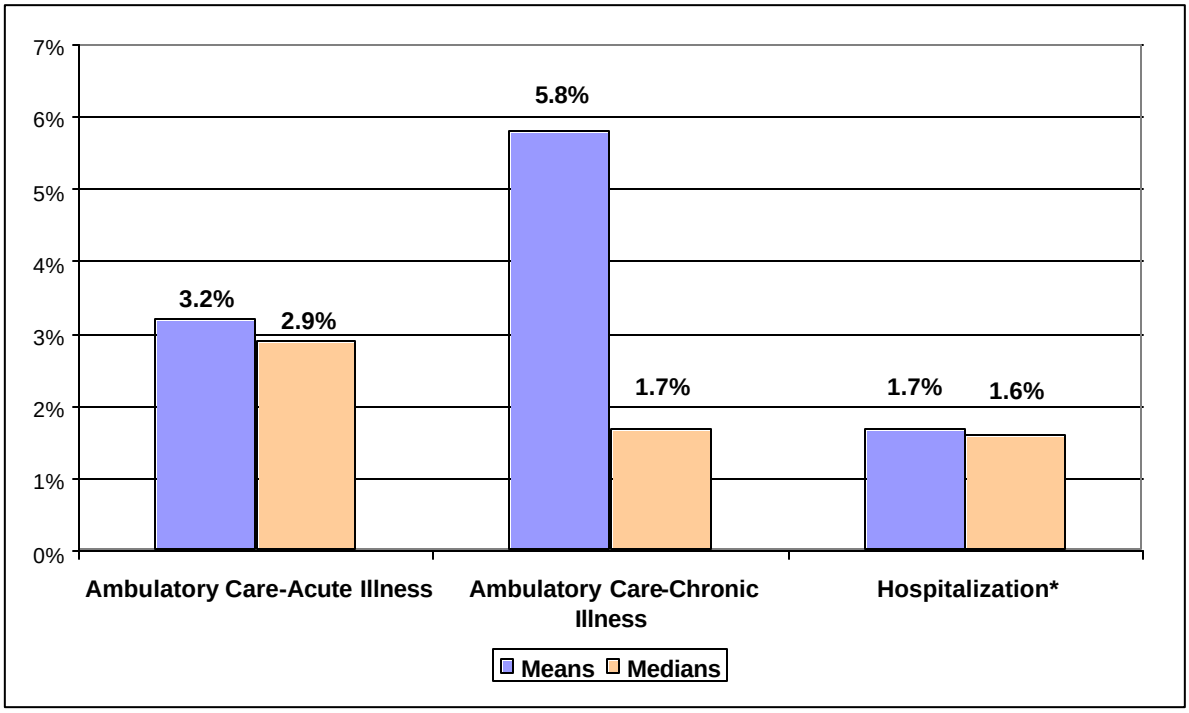
(In current Lempiras)

| Type of Hospital | Number of Patients | Amount Paid for the Hospital Stay* | | | | Additional Payments for In-Hospital Services | | | | Total Payments for In-Hospital Services | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Including All Patients | | Including Only Patients Paying Something | | Including All Patients | | Including Only Patients with Additional Payments | | Including All Patients | | | Only Patients Who Paid |
| | | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Number of Patients | Mean | Median | Number of Patients |
| MOH National | 63,862 | 119 | 50 | 187 | 80 | 14 | 0 | 256 | 225 | 63,862 | 133 | 50 | 41,462 |
| MOH Regional | 66,902 | 68 | 36 | 94 | 50 | 20 | 0 | 357 | 120 | 66,902 | 88 | 40 | 4,870 |
| MOH Area | 16,689 | 88 | 25 | 129 | 40 | 13 | 0 | 83 | 100 | 16.689 | 101 | 25 | 11,408 |
| **All MOH Hospitals** | **147,452** | **92** | **40** | **135** | **70** | **17** | **0** | **248** | **100** | **147,453** | **109** | **40** | **57,740** |
| Private (all) | 40,081 | 10,518 | 1,600 | 10,973 | 1,800 | 432 | 0 | 3,021 | 1,200 | 40,081 | 10,950 | 1,800 | 38,420 |
| Private (w/o 2 outliers) | 39,717 | 5,043 | 1,580 | 5,263 | 1,800 | 435 | 0 | 3,021 | 1,200 | 39,717 | 6,275 | 2,568 | 38,056 |
| IHSS | 14,090 | 2 | 0 | NSS | NSS | NSS | NSS | NSS | NSS | 14,090 | NSS | NSS | 1,446 |
| Other | 3,422 | 3,200 | 50 | NSS | NSS | NSS | NSS | NSS | NSS | 3,422 | NSS | NSS | 2.584 |
| Armed Forces | 1,383 | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | 1,383 | NSS | NSS | 1,383 |
| **All Hospitals** | **246,145** | **2,200** | **50** | **3,228** | **100** | **104** | **0** | **1,268** | **250** | **246,146** | **2,304** | **50** | **197,369** |
| All Except 2 Outliers | 206,065 | 1,129 | 50 | 1,339 | 75 | 104 | 0 | 1,268 | 250 | 206,065 | 1,234 | 50 | 173,825 |

When averaged over all the hospital patients, the additional payments made on-site are relatively small (104 lempiras), but this is primarily because they are relatively infrequent, not because they are insignificant amounts. When they are averaged only over the 8 percent of patients who paid some such fee, the payments exceeded the average fees paid to the hospital (whether measured by the mean or median).

Figure 27 shows the relative price levels of the average payments of MOH patients as a percentage of payments made to private hospitals, physicians, and clinics. They are about one-half of their corresponding curative ambulatory care relative sizes.

**Figure 27: MOH Patients' Average Consultation/Hospitalization Payments as a Percent of Private Sector Patients' Average Payments, by Type of Care***




### 4.4.1 Purchases of Ancillary Goods and Services for Hospitalization

Throughout the health sector, 54 percent of all persons who were hospitalized reported that they had been directed to purchase and had purchased some type of ancillary goods or services. By far the item most commonly purchased was medicine (47 percent of patients), followed by examinations (19 percent of patients). This is the same pattern that was found with curative ambulatory care. Only 5 percent had purchased supplies and 1 percent had purchased equipment.

As shown in Table 32, these proportions varied substantially by type of ancillary good or service, subsector, and type of hospital. The probability of having to make purchases of some ancillary good or service, however, is generally high. The practice was even common among IHSS patients (41 percent), who in the case of outpatient care for acute or chronic illness had the lowest proportions of persons having purchased extra items. Compared to MOH hospitals, patients of private hospitals were 40 percent more likely to have purchased medicines and nearly twice as likely to have

purchased examinations. Within the MOH facilities, it was the patients of the national and regional hospitals who were most likely to have purchased any of the four ancillary items.

**Table 32: Patients' Extra-hospital Costs: The Likelihood of Paying Non-hospital Sources for Medicines, Supplies, Examinations, or Equipment Prescribed as part of the Treatment for the Condition for Which the Patient was Hospitalized**

| Type of Hospital | Number of Patients | Patient Made Extra-hospital Payments for: Medicines | | Patient Made Extra-hospital Payments for: Supplies | | Patient Made Extra-hospital Payments for: Examinations | | Patient Made Extra-hospital Payments for: Equipment | | Patient Had Some Extra-hospital Payments? (For medicines, supplies, exams or equipment) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| MOH National | 63,862 | 36,691<br>57% | 27,131<br>43% | 56,720<br>89% | 7,142<br>11% | 54,693<br>86% | 9,169<br>14% | 63,761<br>100% | 101<br>0% | 31,972<br>50% | 31,890<br>50% |
| MOH Regional | 66,902 | 35,529<br>53% | 31,373<br>47% | 65,840<br>98% | 1,062<br>2% | 53,573<br>80% | 13,329<br>20% | 66,750<br>100% | 152<br>0% | 30,265<br>45% | 36,637<br>55% |
| MOH Area | 16,689 | 10,757<br>64% | 5,932<br>9% | 16,577<br>25% | 112<br>0% | 15,497<br>93% | 1,192<br>2% | 16,689<br>25% | -<br>0% | 10,246<br>15% | 6,443<br>10% |
| **All MOH Hospitals** | **147,453** | **82,978<br>56%** | **64,475<br>44%** | **139,138<br>94%** | **8,315<br>6%** | **123,763<br>84%%** | **23,690<br>16%** | **147,199<br>100%** | **254<br>0%** | **72,483<br>49%** | **74,970<br>51%** |
| Private | 40,081 | 15,729<br>39% | 24,352<br>61% | 38,864<br>97% | 1,217<br>3% | 27,925<br>70% | 12,156<br>30% | 39,304<br>98% | 777<br>2% | 11,751<br>29% | 28,330<br>71% |
| IHSS | 14,090 | 8,792<br>62% | 5,298<br>38% | 13,603<br>97% | 487<br>3% | 11,945<br>85% | 2,145<br>15% | 13,686<br>97% | 404<br>3% | 8,307<br>59% | 5,783<br>41% |
| Other | 3,422 | 1,787<br>52% | 1,635<br>48% | 3,422<br>100% | -<br>0% | 3,313<br>97% | 109<br>3% | 2,898<br>85% | 524<br>15% | 1,787<br>52% | 1,635<br>48% |
| Armed Forces | 1,383 | -<br>0% | 1,383<br>100% | -<br>0% | 1,383<br>100% | 408<br>30% | 975<br>70% | 1,383<br>100% | -<br>0% | -<br>0% | 1,383<br>100% |
| **All** | **206,429** | **109,286<br>53%** | **97,143<br>47%** | **196,410<br>95%** | **10,019<br>5%** | **167,354<br>81%** | **39,075<br>19%** | **204,470<br>99%** | **1,959<br>1%** | **94,328<br>46%** | **112,101<br>54%** |

Table 33 shows the average payments for each of the ancillary items. The next to last row of the table shows that the mean value of the average patient's expenditures on these items was 514 lempiras, and the mean was 45. On average 77 percent of these expenditures are for medicines, with an additional 18 percent accounted for by extra examinations. The average MOH patient spends nearly 300 lempiras, less than one-third of the typical private sector patient.

**Table 33: Hospitalized Patients' Extra-hospital Payments: Average Payments for Medicines, Supplies, Examinations, and Equipment Purchased Elsewhere**

(Averaged over all hospitalized persons, including those with no such payment)

| Type of Hospital | Number of Patients | Cost of Additional Medicines Purchased Elsewhere | | Cost of Additional Supplies Purchased Elsewhere | | Cost of Additional Examinations Purchased Elsewhere | | Cost of Additional Equipment Purchased Elsewhere | | Total Extra-Hospital Payments All Inputs, All Sources | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median |
| MOH National | 63,862 | 201 | 0 | 40 | 0 | 55 | 0 | 2 | 0 | 298 | 0 |
| MOH Regional | 66,902 | 227 | 0 | 2 | 0 | 27 | 0 | 11 | 0 | 268 | 16 |
| MOH Area | 16,689 | 232 | 0 | 1 | 0 | 145 | 0 | 0 | 0 | 378 | 0 |
| **All MOH Hospitals** | **147,453** | **216** | **0** | **18** | **0** | **53** | **0** | **6** | **0** | **293** | **15** |
| Private | 40,081 | 823 | 250 | 4 | 0 | 218 | 0 | 22 | 0 | 1067 | 300 |
| IHSS | 14,090 | 362 | 0 | 6 | 0 | 135 | 0 | 16 | 0 | 518 | 0 |
| Other | 3,422 | 2821 | 0 | 0 | 0 | 3 | 0 | 153 | 0 | 2977 | 0 |
| Armed Forces | 1,383 | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS |
| **All** | **206,429** | **397** | **0** | **14** | **0** | **90** | **0** | **12** | **0** | **514** | **45** |
| **Percent** | | **77%** | | **3%** | | **18%** | | **2%** | | **100%** | |

Table 34 shows the indirect costs of hospitalization. Whereas the indirect costs of ambulatory care were relatively insignificant, on average ranging from 4 lempiras for preventive care to 12 lempiras for acute and 27 lempiras for chronic care, in the case of hospitalization they were many times more, averaging 228 lempiras. Most of these costs were for transportation, suggesting that many of the patients had long commutes to the hospital.

**Table 34: Average Total Amount Paid for Indirect Cists of Hospitalization by Type of Hospital**

(in current Lempiras)

| Type of Hospital | Average Amount Paid for Hotel and Food | | | Average Amount Paid for Transportation | | | Total Indirect Costs Amount Paid for Transportation, Hotel and Food for Patient and Companion(s) if Any | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. of Respondents | Mean | Median | No. of Respondents | Mean | Median | No. of Respondents | Mean | Median |
| MOH National | 63,862 | 68 | 50 | 64,155 | 106 | 50 | 63,862 | 174 | 50 |
| MOH Regional | 66,902 | 57 | 0 | 68,538 | 96 | 50 | 66,902 | 155 | 50 |
| MOH Area | 16,689 | 25 | 0 | 14,111 | 105 | 30 | 16,689 | 132 | 30 |
| **All MOH Hospitals** | **147,452** | **58** | **0** | **149,804** | **101** | **50** | **147,453** | **161** | **50** |
| Private | 40,081 | 133 | 0 | 40,623 | 355 | 32 | 10,081 | 492 | 32 |
| IHSS | 14,090 | 6 | 0 | 14,570 | 112 | 40 | 14,090 | 120 | 45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Other | 3,422 | 235 | 0 | 3,422 | 261 | 10 | 422 | 496 | 10 |
| Armed Forces | 1,383 | 13 | 2 | 1,383 | 156 | 200 | 1,383 | 169 | 200 |
| **All** | **206,429** | **72** | **0** | **209,803** | **154** | **50** | **206,429** | **228** | **50** |

### 4.4.2 Average Total Patient Expenditures for Hospitalization

Table 35 brings together the component parts of separate payments and presents the mean and median total costs of hospitalization by type of cost component and type of hospital. Inclusive of the two private sector outliers, the mean total hospitalization cost was more than 3,000 lempiras, and the median was 340. Excluding the outliers, the mean was 1,853 lempiras. The IHSS mean total cost of hospitalization exceeds that of the MOH (721 versus 563 lempiras), although its median is less at 100 versus 260 lempiras. The private hospital mean is 6,409 lempiras, which is 11 times greater than the MOH's, and its median at 2,600 lempiras is 10 times greater.

**Table 35: Composition of Average Total Patient Cost of Hospitalization**

Includes all patients, regardless of paying status, in current Lempiras

| Type of Hospital | (A) Total Indirect Costs (Transportation, Food & Hotel for Patient and Companion) | | (B) Total Cost for In-hospital Care (Paid within Facility where Patient was Admitted) | | (C) Cost of Ancillary Services Purchased Outside of Hospital (Medicines, Exams & Equipment Purchased Elsewhere) | | (D) Total Treatment Costs (Column B + Column C)) | | (E) Total Cost of Hospitalization (Treatment Costs plus Indirect Costs = Column A + Column D) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** | **Mean** | **Median** |
| MOH National | 174 | 50 | 133 | 50 | 298 | 0 | 431 | 100 | 605 | 280 |
| MOH Regional | 155 | 50 | 88 | 40 | 268 | 16 | 355 | 125 | 510 | 270 |
| MOH Area | 132 | 30 | 101 | 25 | 378 | 0 | 479 | 50 | 611 | 185 |
| **IHSS Hospital** | **161** | **50** | **109** | **40** | **293** | **15** | **402** | **110** | **563** | **260** |
| Private (all) | 492 | 32 | 10,950 | 1,800 | 1,067 | 300 | 12,017 | 2,600 | 12,509 | 2,600 |
| Private (w/o 2 outliers) | 492 | 32 | 5,043 | 1,580 | 1,067 | 300 | 6,274 | 2,568 | 6,409 | 2,600 |
| IHSS | 120 | 45 | NSS | NSS | 518 | 0 | 601 | 0 | 721 | 100 |
| Other | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS |
| Armed Forces | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS | NSS |
| **All Hospitals** | **228** | **50** | **2,304** | **50** | **514** | **45** | **2,817** | **170** | **3,045** | **340** |
| All Except 2 Outliers | 228 | 50 | 1,130 | 50 | 461 | 45 | 1,694 | 170 | 1,853 | 340 |

Figure 28 shows the average composition of these total patient expenditures.

**Figure 28: Average Patient Costs for Hospitalization, by Type of Expenditure**

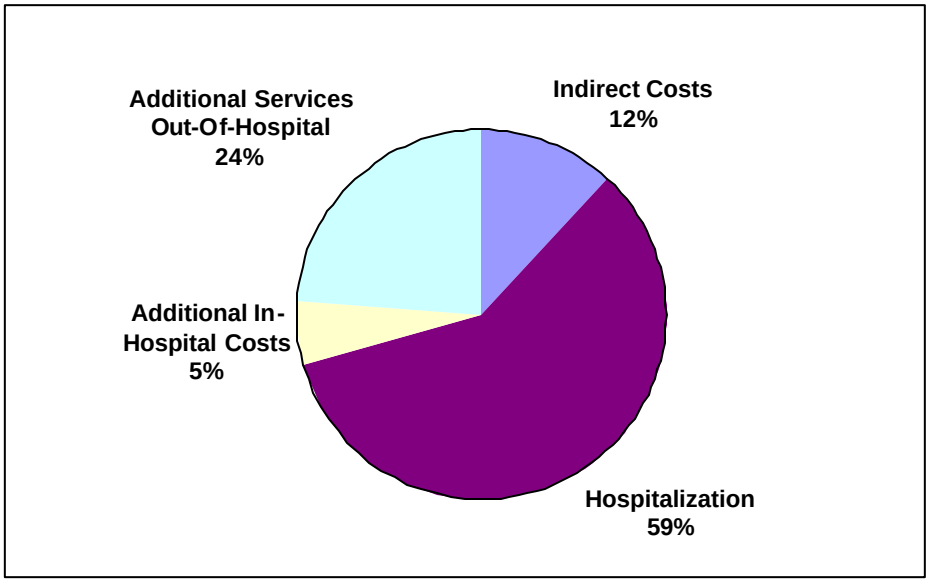
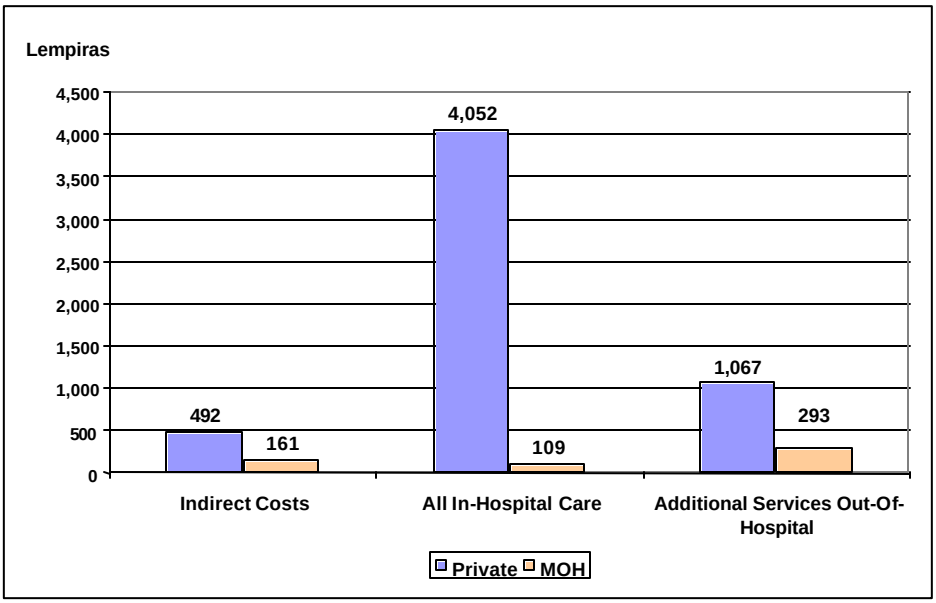



Figure 29 shows how the composition of total hospitalization expenditures of the private hospital and the MOH vary. Whereas 76 percent of private hospital expenditures are in-hospital payments, the corresponding figure in MOH hospitals is 19 percent. Just as was the case with MOH outpatient care, payments by hospitalized patients to the MOH for hospitalization constitutes a relatively small share of the total costs of their care. This is true in each of the three types of MOH hospitals.

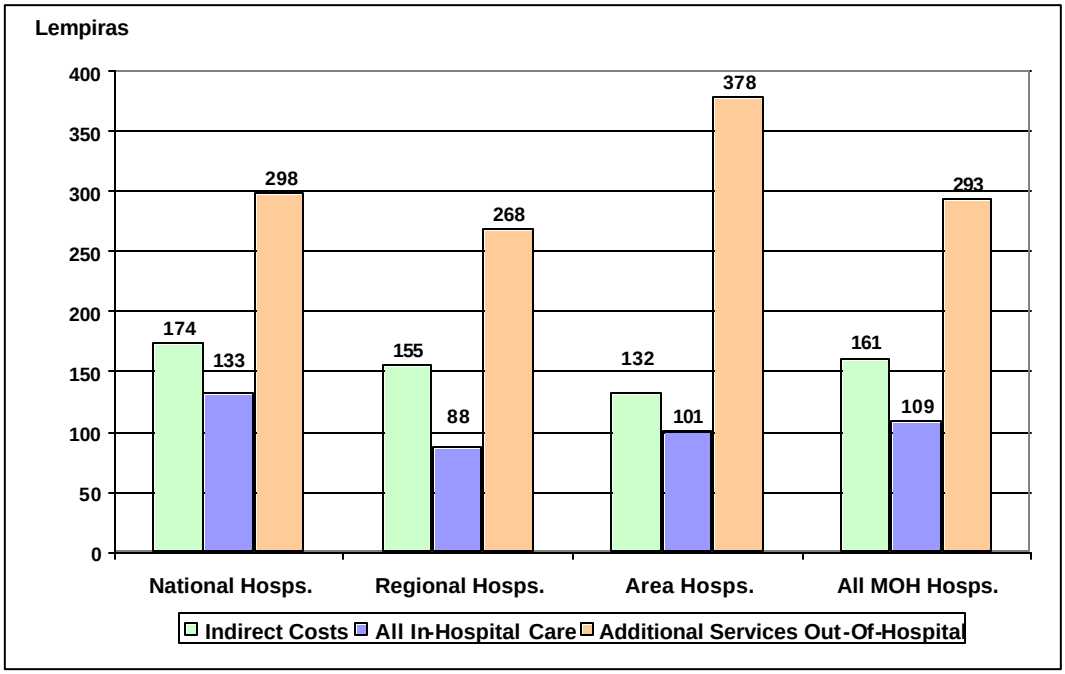
**Figure 29: The Composition of Average Total Patient Costs of Hospitalization in Private versus MOH Hospitals**

Average Total Costs: MOH = 563 Lempiras, Private = 6,409 Lempiras*



As may be seen in Figure 30, in all of the MOH hospitals, in-hospital payments is the smallest of the three component costs of care for the average patient. Even the indirect costs of transportation, food, and lodging exceed their in-hospital payments. The fact that the typical patient's fees at an MOH hospital are only one-fifth of the patient's total hospitalization-related costs must be borne in mind when considering changing MOH user fee levels. The payments for ancillary goods and services are "hidden" fees, which further constraint would-be patients' willingness and ability to pay for care. Thus, there is less room for increasing fees levels without having a deleterious impact on access and utilization than is suggested from simply looking at the inpatient fee levels.

**Figure 30: Average Total Patient Costs of Hospitalization, by Type of MOH Hospital and Type of Expenditure**




It is interesting to note that the average total cost differential between a chronic outpatient visit and a hospitalization is about 6 to 1, and between an acute visit and a hospitalization it is about 12 to 1. This differential characterizes the average total costs of all providers. Within both the MOH and the private sector, these cost differentials across different types of services are of the same order of magnitude.

### 4.4.3 Total Expenditures for the Hospitalization

Patient expenditures for hospital inpatient care in the previous year totaled 581.6 million lempiras.

Table 36 presents a breakdown of the total payments by type of cost and source of care. Hospitalization fees, at 78 percent, constitute the majority of the total treatment costs of hospitalization. The private hospital sector collects 93 percent of all hospitalization fees. Hospitalization fees at MOH national hospitals, as a percent of total treatment costs, are nearly 50 percent higher than fees at regional and area hospitals. Beyond this one exception, the structure of the

total patient expenditures is not remarkably different across the three different types of MOH hospitals. Patients hospitalized in an IHSS facility pay virtually nothing in hospitalization fees.

**Table 36: Total Patient Hospitalization Fees, by Source of Care**

(Estimated total paid for all care in the past 12 months, in current Lempiras)

| Source of Care | Hospita-lization (Only) Fees | Additional In-Hospital Fees | Ancillary Costs-Purchased Elsewhere | | | | Total Treatment Costs |
|---|---|---|---|---|---|---|---|
| | | | Medicines | Other Supplies | Examinations | Equipment | |
| MOH National Hospital | 7,573,977 | 904,108 | 12,861,129 | 2,538,448 | 3,513,136 | 131,157 | 27,521,956 |
| MOH regional Hospital | 4,534,001 | 1,329,627 | 15,178,133 | 143,198 | 1,825,284 | 760,500 | 23,770,742 |
| MOH Area Hospital | 1,468,968 | 217,353 | 3,870,073 | 22,234 | 2,421,214 | - | 7,999,842 |
| IHSS Hospital | 32,495 | 1,124,990 | 5,095,808 | 83,405 | 1,897,599 | 227,943 | 8,462,241 |
| Armed Forces | 7,906,592 | - | 2,373,203 | - | 156,011 | - | 10,435,806 |
| Private Hospital | 421,581,151 | 17,293,163 | 32,987,274 | 172,053 | 8,753,781 | 862,530 | 481,649,952 |
| All Other | 10,949,738 | 615,630 | 9,654,784 | - | 8,761 | 523,940 | 21,752,853 |
| **All Sources** | **454,046,923** | **21,484,871** | **82,020,404** | **2,959,337** | **18,575.787** | **2,506,070** | **581,593,391** |
| | | | | | | | |
| MOH National Hospital | 2% | 4% | 16% | 86% | 19% | 5% | 5% |
| MOH regional Hospital | 1% | 6% | 19% | 5% | 10% | 30% | 4% |
| MOH Area Hospital | 0% | 1% | 5% | 1% | 13% | 0% | 1% |
| IHSS Hospital | 0% | 5% | 6% | 3% | 10% | 9% | 1% |
| Armed Forces | 2% | 0% | 3% | 0% | 1% | 0% | 2% |
| Private Hospital | 93% | 80% | 40% | 6% | 47% | 34% | 83% |
| All Other | 2% | 3% | 12% | 0% | 0% | 21% | 4% |
| **All Sources** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** | **100%** |
| | | | | | | | |
| MOH National Hospital | 28% | 3% | 47% | 9% | 13% | 0% | 100% |
| MOH regional Hospital | 19% | 6% | 64% | 1% | 8% | 3% | 100% |
| MOH Area Hospital | 18% | 3% | 48% | 0% | 30% | 0% | 100% |
| IHSS Hospital | 0% | 13% | 60% | 1% | 22% | 3% | 100% |
| Armed Forces | 76% | 0% | 23% | 0% | 1% | 0% | 100% |
| Private Hospital | 88% | 4% | 7% | 0% | 2% | 0% | 100% |
| All Other | 50% | 3% | 44% | 0% | 0% | 2% | 100% |
| **All Sources** | **78%** | **4%** | **14%** | **1%** | **3%** | **0%** | **100%** |

## 4.5 A Rough Approximation of Total Annual Expenditures on Health Care

### 4.5.1 A Survey Shortcoming and Caveat

To simplify data collection efforts, those persons who had more than one visit or hospitalization during the recall period were asked only about their last visit or admission.

Interviewees were asked about the total number of visits or admissions that occurred during the recall period for each type of illness and care. Those persons who had more than one visit or admission are assumed to have obtained their subsequent visits from the same source. The degree of uncertainty associated with this assumption is directly related to the proportion of persons who had more than a single visit during the recall period. The percentage of patients that had only one visit during the recall period were as follows: 77 percent of acute outpatients, 48 percent of chronic outpatients, 84 percent of preventive care users, and 89 percent of persons hospitalized. The uncertainty is greatest for the chronically ill. However, by virtue of the persistent nature of their problem, these patients are probably more likely to have a routine provider of care. For inpatient care, 89 percent of the persons who were hospitalized in the past year were hospitalized only once.

The only information available by which to explore the degree of inaccuracy that this procedure enters into the calculations is MOH service delivery totals. Juxtaposing the official MOH 1998 service delivery statistics with the estimates derived from the survey provides a gauge, albeit a crude one. The survey-based extrapolation is 7.8 percent less than the total of 6,253,700 ambulatory care visits that official MOH statistics reported in 1998. The timing of the survey and its recall periods, however, do not coincide with the calendar year. The survey was conducted from September 1998 to March 1999. Another possible source of variation may be seasonal variations in illness and care-seeking rates, both of which are lower in winter and during the Christmas holiday. These factors, combined with the sampling error, probably account for the survey's apparent underreporting of MOH service provision. In sum, the assumption does not seem to result in MOH service delivery totals that deviate widely from official data, and by extension, it is thought that the assumption does not greatly distort the MOH's delivery of services.

In order to develop an estimate of total MOH user fee revenues, it would be necessary to make the same assumption about the source of all visits, other than just the last visit, made during the recall period. In addition, since there is no information about fees paid during those visits, it is necessary to make some type of assumption about the payments to be able to estimate the total annual MOH revenues. Making both of these assumptions and then still needing to extrapolate the data to one year provides what should be regarded as a very rough approximation of the total payments for the year. In the following analysis, it is assumed that the user fee paid for the patient's last visit is the same as was paid for all previous visits for that particular type of care (acute, chronic, preventive, or hospitalization) during the recall period.

### 4.5.2 Total Annual Patient Expenditures on Medical Care at the Site of the Consultation or Hospitalization

The estimated totals of patient payments for care are presented in Table 37.

**Table 37: Estimated Total Patient Payments for Care by Source**

| Strata | Acute Consultation (Last 30 Days) | Chronic Consultation* (Last 3 Months) | Preventive Consultation (Last 3 Months) | Hospitalization (Last 12 Months) | Total Annualized Treatment Payments |
|---|---|---|---|---|---|
| MOH National Hospital | 349,023 | 3,707,146 | 61,182 | 9,195,054 | 28,514,929 |
| MOH regional Hospital | 1,431,694 | 604,591 | 101,725 | 6,716,899 | 26,961,584 |
| MOH Area Hospital | 51,245 | 71,707 | 69,070 | 1,788,571 | 2,975,177 |
| IHSS Hospital | 118,412 | 97,841 | 0 | 2,478,937 | 4,311,020 |
| Private Hospital | 2,885,545 | 8,584,162 | 2,590,280 | 716,451,573 | 796,257,767 |
| CESAR | 398,026 | 198,181 | 154,500 | | 6,253,506 |
| CESAMO | 341,698 | 1,371,305 | 89,914 | | 10,002,316 |
| Private Physician/Clinic | 36,200,642 | 57,421,819 | 1,023,151 | | 674,233,091 |
| Traditional Healer | 73,748 | 1,185,819 | 0 | | 5,640,568 |
| All Others | 1,419,450 | 35,060,318 | 8,320,068 | 21,918,160 | 212,710,152 |
| **All Sources** | **43,269,483** | **108,302,889** | **12,409,890** | **758,549,194** | **1,767,860,110** |
| All MOH Facilities | 2,571,686 | 5,952,930 | 476,391 | 17,700,524 | 74,707,512 |
| | | | | | |
| MOH National Hospital | 1% | 3% | 0% | 1% | 2% |
| MOH regional Hospital | 3% | 1% | 1% | 1% | 2% |
| MOH Area Hospital | 0% | 0% | 1% | 05 | 0% |
| IHSS Hospital | 0% | 0% | 0% | 0% | 0% |
| Private Hospital | 7% | 8% | 21% | 94% | 45% |
| CESAR | 1% | 0% | 1% | 0% | 0% |
| CESAMO | 1% | 15 | 1% | 0% | 1% |
| Private Physician/Clinic | 84% | 53% | 8% | 0% | 38% |
| Traditional Healer | 0% | 1% | 0% | 0% | 05 |
| All Others | 3% | 32% | 67% | 3% | 12% |
| **All Sources** | **100%** | **100%** | **100%** | **100%** | **100%** |
| All MOH Facilities | 6% | 5% | 4% | 2% | 4% |
| | | | | | |
| MOH National Hospital | 15% | 52% | 1% | 32% | 100% |
| MOH regional Hospital | 64%^ | 9% | 2% | 25% | 100% |
| MOH Area Hospital | 21% | 10% | 9% | 60% | 100% |
| IHSS Hospital | 33% | 98% | 0% | 58% | 100% |
| Private Hospital | 4% | 4% | 1% | 90% | 100% |
| CESAR | 76% | 13% | 10% | 0% | 100% |
| CESAMO | 41% | 55% | 4% | 0% | 100% |
| Private Physician/Clinic | 64% | 34% | 1% | 0% | 100% |
| Traditional Healer | 16% | 84% | 0% | 0% | 100% |
| All Others | 8% | 66% | 16% | 10% | 100% |
| **All Sources** | **29%** | **25%** | **3%** | **43%** | **100%** |
| All MOH Facilities | 41% | 32% | 3% | 24% | 100% |

Note: Includes only fees paid at the place of the visit. See the text for a complete discussion of the assumptions required to develop these rough approximations.

The four columns in Table 37, one for each of the four different types of care, incorporate the assumptions about the same source and same payment being made for all visits, other than the last visit made for that particular type of care, during each type of care's respective recall period. The right-hand column then extrapolates (linearly) the individual entries to one year. Table 37 includes only payments paid at the place of the visit. It does not include all patient costs. More specifically, it excludes the costs of all ancillary goods and services.

Total annualized patient payments at the place of the consultation are estimated to have been 1.77 billion lempiras. The MOH's revenues were 74.8 million lempiras, 5 percent of the total. This estimate of MOH revenues is 2.5 times greater than what official MOH records reported as the facilities' total revenues in 1999. Although the reporting periods were not identical, there was substantial overlap. Given the inability to judge the accuracy of the estimated totals and their considerable variation from official data, the authors do not provide further discussion of these figures and urge caution in using them.

# 5. Assessing the Equity of the MOH User Fee System

Years of analyzing household income and expenditures survey data have demonstrated that people are generally reluctant to report their income. They are much more likely to accurately report their expenditures. This has given rise to income and expenditures survey analysts commonly using expenditure data as a proxy measure for income, rather than using self-reported income data. This common practice was used in developing the ENIGH's measures of income as well.

Using ENIGH data, households were divided into five equal groupings (or quintiles) based on the size of their income. By comparing the size distribution of income by quintile, analysts found that the distribution of income in Honduras is highly inequitable. The poorest fifth of the population (i.e., the first income quintile) receives only 3 percent of total household income; the second quintile receives 8 percent; the third, 15 percent; the fourth, 28 percent; and the fifth quintile receives 47 percent of total income. According to the official Government of Honduras' definition of poverty, nearly 60 percent of Hondurans live in relative poverty and slightly more than one-quarter live in absolute poverty.

Four indicators of the equity in the use of MOH services will be analyzed in this section:

1. Proportion of each household income quintile using MOH services
2. Proportion of each household income quintile that is exonerated from paying for care
3. Average price paid, measured in absolute terms (lempiras)
4. Average price paid, measured relative to (as a percentage of) income.

In the analysis the focus will be on "the poor," which throughout this discussion will refer to the poorest one-fifth, the lowest household income quintile, of the population.

The use of different types of services will be analyzed separately, as the Ministry's stated goals and objectives with regard to preventive care are different, and the policy, monitoring, and cost implications of inpatient and outpatient care vary. Thus the four equity indicators will be analyzed for the following:

- All curative outpatient care (the sum of acute and chronic care)
- Preventive outpatient care
- Inpatient care.

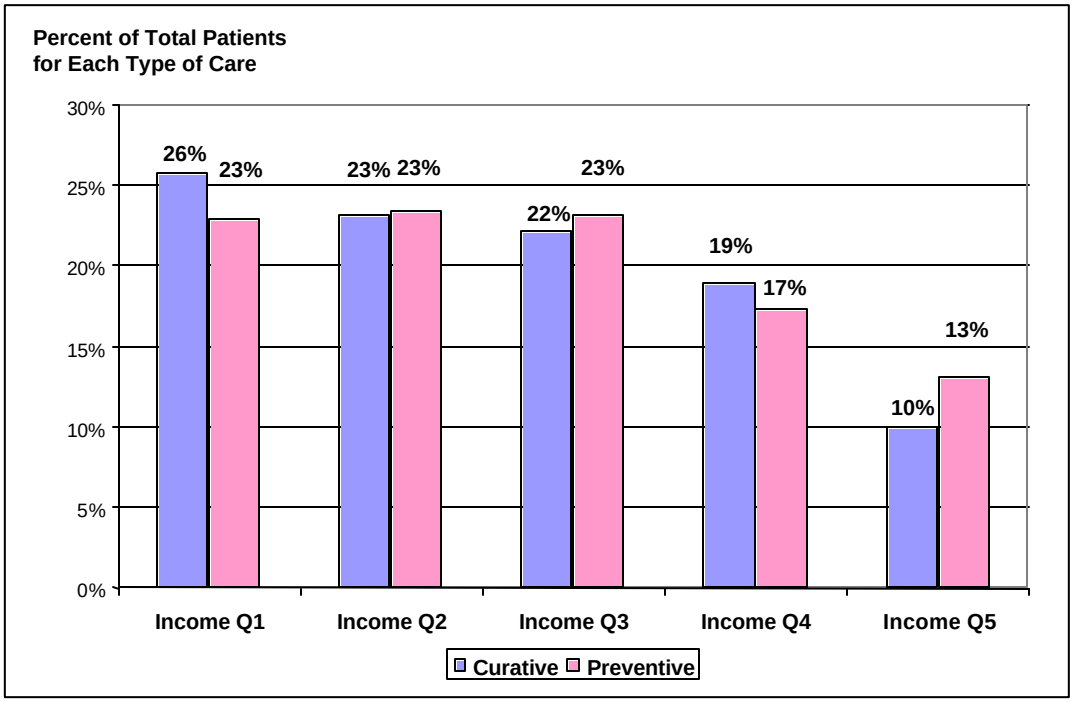
## 5.1 Assessment of the Equity of MOH Outpatient Care

### 5.1.1 Equity in the Use of MOH Outpatient Services: Self-Targeting

The extent to which the proportion of each income quintile voluntarily chooses to use MOH services may be defined as the extent to which that income group is self-targeted in the use of MOH care. The MOH's primary target population is low- and middle-income classes. Higher income groups have the wherewithal to purchase care from private providers. The extent to which they do so enables the MOH to concentrate its resources and thus provide more and better care to low- and middle-income persons.

Figure 31 shows the proportion of MOH patients by income quintile for curative and preventive care.

**Figure 31: Assessing the Extent of MOH Outpatient Care Self-Targeting: The Proportion of Total Patients by Income Quintile**




If each household income quintile used MOH services in direct proportion to its prevalence in the population, each quintile would represent 20 percent of MOH patients. Looking at the Honduran health care delivery system as a whole, the coverage and consultation rates of the four top income quintiles are greater than the first (lowest) income quintile (refer back to Table 5). When the analysis is restricted to only MOH services, however, Figure 31 shows that a larger proportion of the lower income quintiles are MOH patients. Looking just at curative care services, the poorest three quintiles all account for more than 20 percent of MOH patients; i.e., each account for a disproportionately large share of MOH patients. In contrast, the two top quintiles, account for a disproportionately small share of MOH patients. This reflects the fact that households in the fourth, and particularly the fifth, income quintiles are more likely to seek care in the private sector, and it demonstrates that self-

targeting is occurring in a manner consistent with the Ministry's goal of focusing its services on low- and middle-income households. The proportion of MOH patients that come from each income quintile is the highest for the first income quintile—the poorest—and the proportion falls with each income quintile, reaching its smallest level with the highest income group. This inverse relationship between the MOH's share of patients coming from each income level and the increasing income quintile is entirely consistent with the Ministry's goal of targeting its resources on low- and middle-income Hondurans, and it reflects self-targeting. The question remains, however, as to whether the extent to which self-targeting is occurring is adequate.

The same basic inverse relationship between the MOH's share of patients and income quintile also characterizes preventive care service utilization, although the degree of variation in use by quintile is not as pronounced.

### 5.1.2 Equity in Payment Rates and Levels by Household Income Quintile

#### 5.1.2.1 Proportion of Ambulatory Patients Exonerated from Payment by Household Income Quintile: Defining and Quantifying Type I and II Errors

Figures 32 and 33 show the proportion of patients exonerated from payment by household income quintile for curative and preventive care, respectively. A health care system that promotes equity by exonerating relatively more low-income persons and relatively fewer high-income persons would have a steadily declining curve that maps out the relationship between the proportion of patients exempted from payment and patients' household income quintile. This was observed for the relationship between the proportion of MOH patients who came from each income quintile (refer back to Figure 31). Such is not the case here, however. In the case of preventive care, the relationship is just the opposite, mapping out a direct relationship between the level of exoneration and income: the poorest are the least likely to be exonerated from payment, although it is important to note that nearly nine in 10 of even the lowest income quintiles are provided free preventive services.

**Figure 32: Assessing Curative Outpatient Care Targeting in MOH Facilities: The Proportion of Patients Exonerated from Payment by Income Quintile**

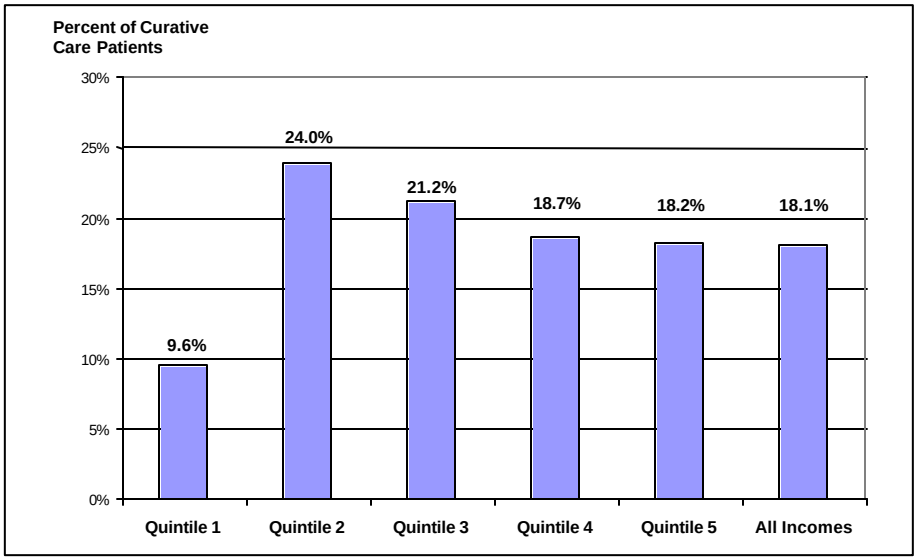
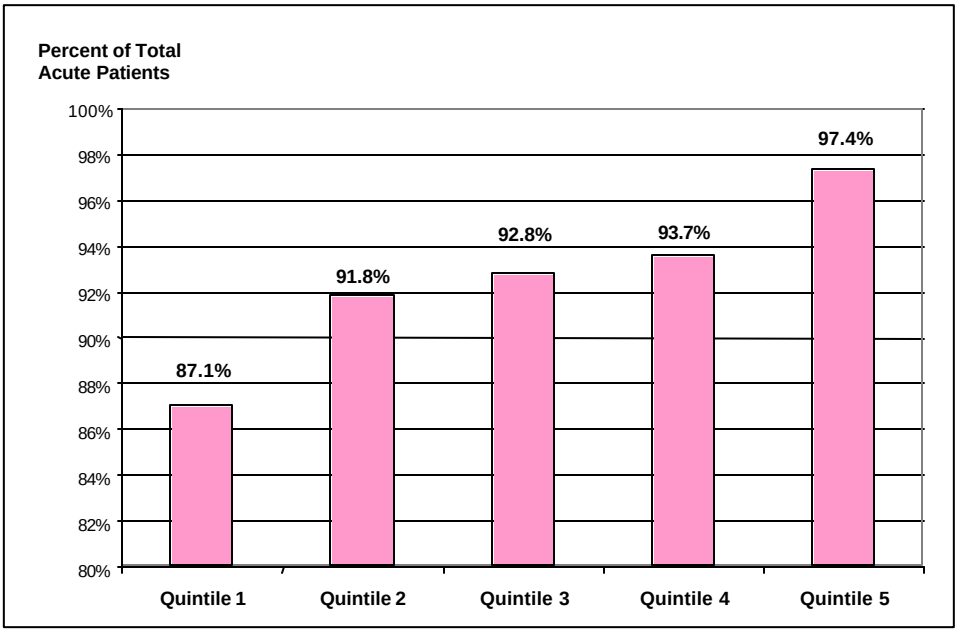


**Figure 33: Assessing Preventive Care Targeting in MOH Facilities: The Proportion of Patients Exonerated from Payment by Income Quintile**




Curative care payment exemptions were not found to be equitable either. Whereas 18.1 percent of MOH patients overall are exempted from paying for their curative care, among the poorest MOH patients only about half—9.6 percent—receive free care. In other words, nearly twice as large a share of the MOH patients from the first income quintile pay for their care as do those from the fifth income quintile. This is highly inequitable.

There are two commonly used indicators of the degree of equity of a user fee system: Type I and Type II errors. A Type I error occurs when the poor are not being identified as poor, and thus do not receive the benefits that should be accorded them of paying less or nothing for their care. Type I errors result in under coverage of the population by discouraging poor persons from accessing health care due to the high frequency with which they are erroneously charged for care or charged too much for care. A Type II error occurs when those who are not poor are identified as poor, and thus receive the benefits of paying less or nothing for their care. Type II errors result in the MOH capturing fewer revenues than it should because persons who have the ability to pay for their care are not paying for it or are not paying enough for it.

The way in which Type I and Type II errors are defined depends upon what the MOH regards as its target population—that is, those to whom it wants to channel the benefits of low-priced or free care—and who it does not regard as its target population—that is, those to whom it does not want to channel the benefits of low-priced or free care. The MOH of Honduras has not explicitly stated whom it regards as its target population. In the discussion presented here, it is assumed that its target population is the two poorest household income quintiles and the benefit that is to be channeled to this group is free care. These are the criteria that will be used to define Type I errors in this discussion. A Type I error is defined as persons who are in the first or second household income quintile who had to pay user fees for the care they received from an MOH facility. A Type II error will be defined as persons from the fifth household income quintile who were not charged user fees

for the care they received from an MOH facility. It should be noted that because the Ministry chooses to encourage the use of preventive care, regardless of income, it does not charge anything for preventive services. Thus there are no Type II errors for preventive services.

Table 38 shows measures of the user fee-paying status of all users of MOH facilities, disaggregated by type of outpatient care and income quintile. As measured by Type I errors, preventive care is the type of care that is provided most equitably. Although the differences between acute and chronic illness care are small, acute care is provided less equitably. Type II errors are substantially smaller than Type I errors, but are by no means small or uncommon. The greatest Type II errors are in the provision of chronic as opposed to acute illness care.

**Table 38: The Accuracy of Targeting in MOH Facilities by Type of Care**

| Type of Outpatient Care | Income Quintiles | Number Who Received care | Number Who Paid Nothing | Percent Who Paid Nothing | Mean Payment | Median Payment | Share of Patients | Type I Error | Type II Error |
|---|---|---|---|---|---|---|---|---|---|
| **Acute** | 1 | 62,063 | 5,046 | 8.1% | 2.2 | 2.0 | 27.6%$ | | |
| | 2 | 54,626 | 11,045 | 20.2% | 3.1 | 2.0 | 24.3% | 86% | |
| | 3 | 56,664 | 10,883 | 19.2% | 18.1 | 2.0 | 25.2% | | |
| | 4 | 45,639 | 6,492 | 14.2% | 5.8 | 2.0 | 20.3% | | |
| | 5 | 21,846 | 3,789 | 17.3% | 12.1 | 2.0 | 9.7% | | 17.3% |
| | All | 240,911 | 37,327 | 15.5% | 7.7 | 2.0 | 107.0% | | |
| **Chronic** | 1 | 27,065 | 3,496 | 12.9% | 12.3 | 2.0 | 25.8% | | |
| | 2 | 25,449 | 8,322 | 32.7% | 6.2 | 1.0 | 24.2% | 77% | |
| | 3 | 19,864 | 5,358 | 27.0% | 5.8 | 2.0 | 18.9% | | |
| | 4 | 19,858 | 5,891 | 29.7% | 11.2 | 1.0 | 18.9% | | |
| | 5 | 12,720 | 2,507 | 19.7% | 84.9 | 3.0 | 12.1% | | 19.7% |
| | All | 104,957 | 25,573 | 24.4% | 18.2 | 2.0 | 100.0% | | |
| **Preventive** | 1 | 124,836 | 108,717 | 87.1% | 0.3 | 0.0 | 22.9% | | |
| | 2 | 127,587 | 117,186 | 91.8% | 0.3 | 0.0 | 23.4% | 11% | |
| | 3 | 126,272 | 117,189 | 92.8% | 0.3 | 0.0 | 23.2% | | |
| | 4 | 94,414 | 88,420 | 93.7% | 0.2 | 0.0 | 17.3% | | |
| | 5 | 71,641 | 69,777 | 97.4% | 2.0 | 0.0 | 13.2% | | |
| | All | 544,750 | 501,884 | 92.1% | 0.5 | 0.0 | 100.0% | | |
| **All Curative (Acute + Chronic)** | 1 | 89,128 | 8.542 | 9.6% | 5.7 | 2.0 | 25.8% | | |
| | 2 | 79,881 | 19,172 | 24.0% | 4.1 | 2.0 | 23.1% | 84% | |
| | 3 | 76,529 | 16,241 | 21.2% | 15.0 | 2.0 | 22.2% | | |
| | 4 | 65,344 | 12,229 | 18.7% | 7.5 | 2.0 | 18.9% | | |
| | 5 | 34,566 | 6,295 | 18.2% | 38.9 | 2.0 | 10.0% | | 18.2% |
| | All | 345,520 | 62,552 | 18.1% | 11.0 | 2.0 | 100.0% | | |

### 5.1.2.2 Absolute and Relative Outpatient User Fee Payments by Household Income Quintile

Figure 34 shows the average price paid for curative care. The median payment does not vary by income quintile; it is 2.0 lempiras, regardless of the patient's income. The mean payment levels do not vary systematically with income quintile. Patients from the lowest income quintile pay nearly the same amount (5.7 lempiras) that all patients pay (5.9 lempiras).

**Figure 34: Assessing Curative Outpatient Care Targeting in MOH Facilities: The Average Price Paid by Income Quintile**

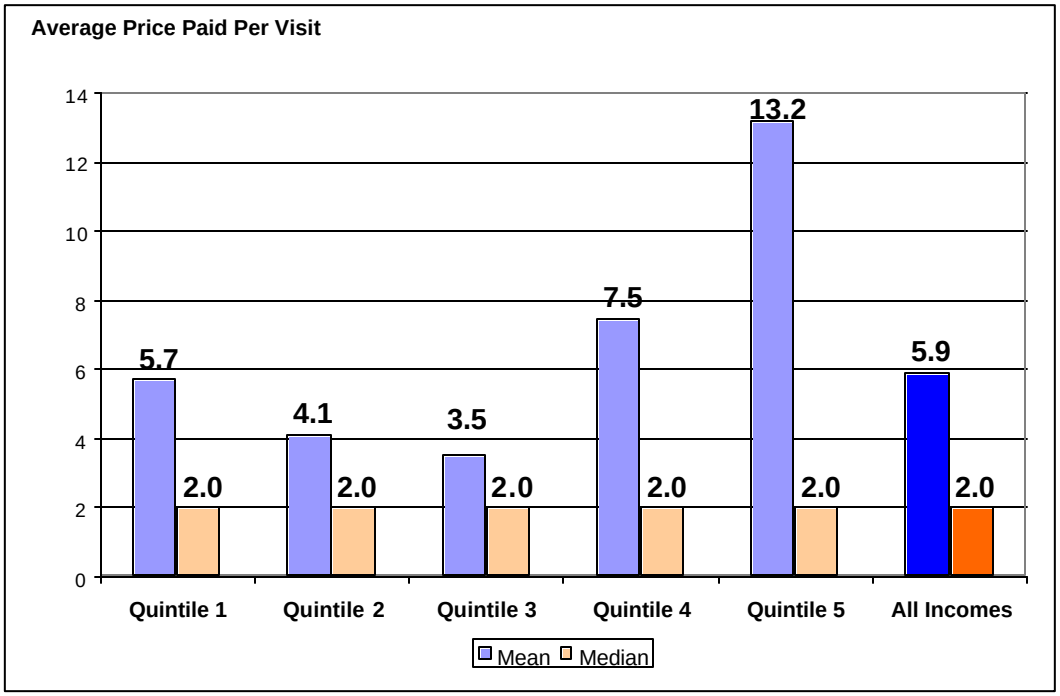
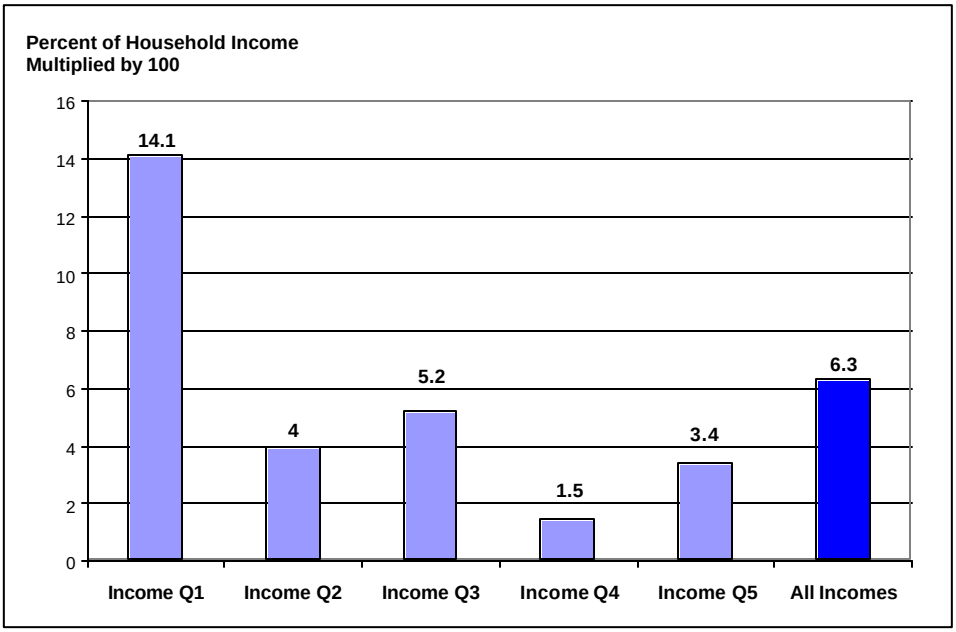



Figure 35 shows the average user fee payments as a percent of household income multiplied by 100 for each income quintile. Averaged over all income levels, this number is 6.3. Only the first income quintile pays a higher proportion than this, and it pays more than twice this amount. The two top income quintiles pay the smallest relative user fees—about half the proportion paid by all patients. The first income quintile's mean of 14.1 is statistically significantly higher than that of the other four income quintiles combined (the latter's mean is 3.65, and the calculated t-statistic of the differences in these means is 81.08, significant at beyond the 99 percent level).

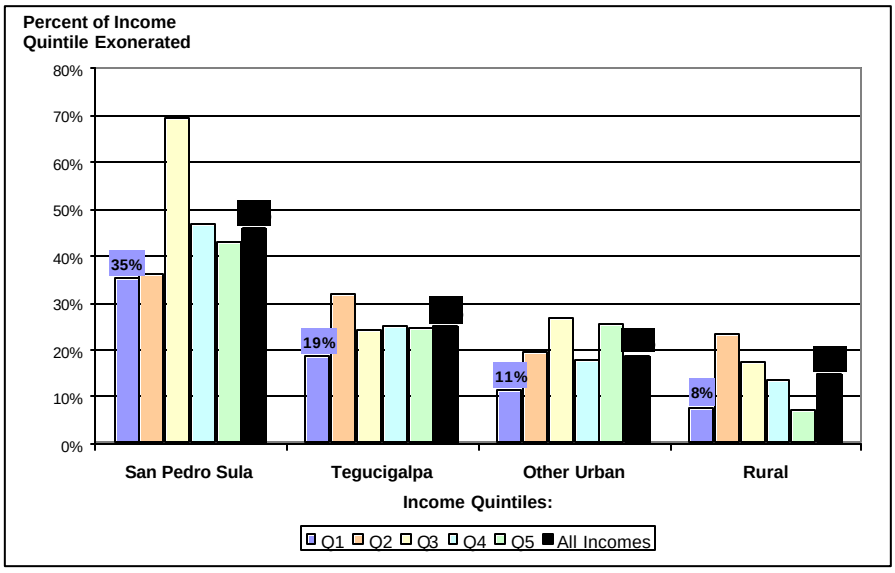
**Figure 35: Average MOH Curative Care User Fee Payment Relative to Household Income: Variations by Household Income Quintile**




### 5.1.3 Equity in Outpatient User Fee Exemptions by Strata: Quantifying Type I and II Errors by Strata

Figure 36 disaggregates the national level analysis of the proportion of patients exempted from curative care payment to the individual strata. The checkerboard pattern columns show the overall average proportion of patients who receive free care in each stratum. The proportion of free care provided by market is highest in San Pedro Sula, followed by Tegucigalpa, other urban areas, and rural areas.

**Figure 36: The Proportion of MOH Curative Care Patients Exonerated from Payment by Income Quintile and Strata**



In each of the four market areas the proportion of patients from the lowest income quintile that is exempted from payment is lower than that particular market's overall average and lower than each of the other four income quintiles; i.e., in each of the four health care markets, patients from the poorest fifth of households are the patients most likely to have to pay for care.

Table 39 shows the accuracy of targeting curative care in MOH facilities, using the same definitions of "poor" and "benefits." Type I errors are highest for the poorest income quintile in rural and other urban areas and lowest in SPS, where incomes are the highest. The magnitude of Type II errors follows the reverse ordering of the Type I errors; they are lowest in the rural areas and highest in SPS.

**Table 39: The Accuracy of Targeting Curative Care in MOH Facilities, by Strata**

Includes both chronic and acute care

| Strata/ Market | Income Quintiles | Number Who Receiv-ed Care | Number Who Paid Nothing | Percent Who Paid Nothing | Mean Pay-ment | Median Pay-ment | Share of Pa-tients | Type I Error | Type II Error |
|---|---|---|---|---|---|---|---|---|---|
| **Tegucigalpa** | 1 | 6,359 | 1,185 | 18.6% | 1.3 | 1.0 | 14.2% | | |
| | 2 | 7,285 | 2,335 | 32.1% | 1.8 | 1.0 | 16.3% | 74% | |
| | 3 | 8,270 | 1,994 | 24.1% | 7.0 | 1.0 | 18.5% | | |
| | 4 | 14,527 | 3,652 | 25.1% | 1.8 | 1.0 | 32.4% | | |
| | 5 | 8,222 | 2,047 | 24.9% | 21.3 | 1.0 | 18.4% | | 25% |
| | All | 44,773 | 11,285 | 25.2% | 6.3 | 1.0 | 100.0% | | |
| **San Pedro Sula** | 1 | 462 | 163 | 35.3% | 0.6 | 1.0 | 3.7% | | |
| | 2 | 3,284 | 1,187 | 36.1% | 10.6 | 1.0 | 26.1% | 64% | |
| | 3 | 2,073 | 1,435 | 69.2% | 2.5 | 0.0 | 16.5% | | |
| | 4 | 2,713 | 1,274 | 47.0% | 4.8 | 1.0 | 21.6% | | |
| | 5 | 4,031 | 1,726 | 42.8% | 7.7 | 1.0 | 32.1% | | 43% |
| | All | 12,563 | 5,785 | 46.0% | 6.7 | 1.0 | 100.0% | | |
| **Other Urban** | 1 | 21,680 | 2,464 | 11.4% | 3.0 | 2.0 | 28.4% | | |
| | 2 | 14,981 | 2,909 | 19.4% | 3.7 | 2.0 | 19.6% | 85% | |
| | 3 | 13,271 | 3,533 | 26.6% | 74.0 | 3.0 | 17.4% | | |
| | 4 | 16,545 | 2,962 | 17.9% | 21.4 | 2.0 | 21.7% | | |
| | 5 | 9,932 | 2,522 | 25.4% | 9.2 | 3.0 | 13.0% | | 25% |
| | All | 76,409 | 14,390 | 18.8% | 20.2 | 2.0 | 100.0% | | |
| **All Rural Areas** | 1 | 60,628 | 4,729 | 7.8% | 7.2 | 2.0 | 28.6% | | |
| | 2 | 54,332 | 12,742 | 23.5% | 4.1 | 2.0 | 25.7% | 85% | |
| | 3 | 52,915 | 9,278 | 17.5% | 2.0 | 2.0 | 25.0% | | |
| | 4 | 31,560 | 4,342 | 13.8% | 3.0 | 2.0 | 14.9% | | |
| | 5 | 12,382 | 908 | 7.3% | 84.5 | 3.0 | 5.8% | | 7% |
| | All | 211,817 | 31,092 | 14.7% | 9.0 | 2.0 | 100.0% | | |

### 5.1.4 Equity in MOH Outpatient User Fee Payment by Type of Facility: Quantifying Type I and II Errors by Type of MOH Facility

Figure 37 breaks down the national level analysis by type of MOH facility. Again, the checkerboard pattern columns show the average proportion of patients overall who receive free care. The proportion of free care provided in MOH hospitals is two to four times higher than the proportion provided in CESARs and CESAMOs. In each type of MOH facility, the proportion of patients from the lowest income quintile that is exempted from paying for curative care is less than the percentage of all patients using that type of facility who do not pay for care. Moreover, in national hospitals, area hospitals, CESARs, and CESAMOs, patients from the lowest income quintile are more likely to pay for care than patients from any other income quintile. Only in the case of regional hospitals is the percentage of the poorest fifth of households that does not pay for care higher than at least one other income quintile, and even then patients from the richest one-fifth of households are more likely to be exempt from paying for their care than are the poorest households.

**Figure 37: The Proportion of MOH Curative Care Patients Exonerated from Payment, by Income Quintile and Type of Facility**

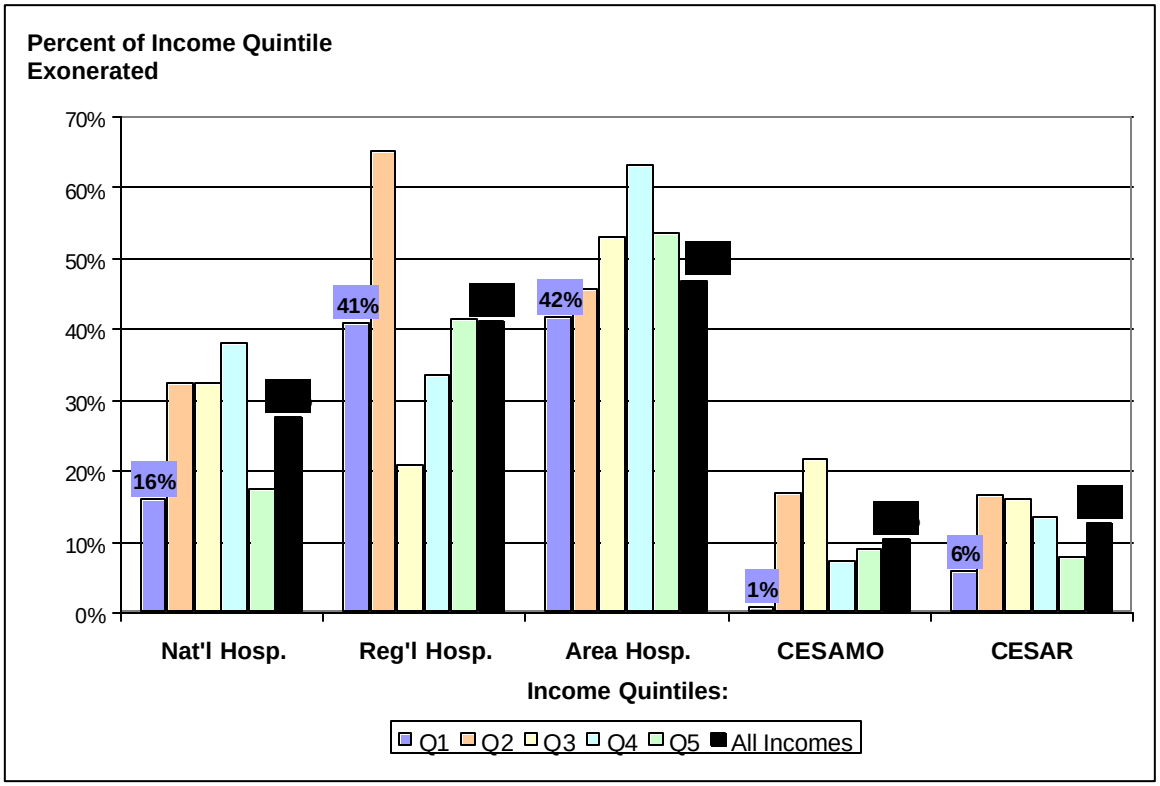



Table 40 shows the accuracy of targeting curative care in MOH facilities, using the same definitions of "poor" and "benefits." Type I errors are highest in the lowest tiered facilities—the CESARs and CESAMOs—and lowest in the regional and area hospitals, with national hospitals being an intermediate case. As found in the other accuracy assessments, there is an inverse relationship between the magnitude of Type I errors and the magnitude of Type II errors. Type II errors are lowest in the lowest tiered facilities and highest in the hospitals. The magnitude of Type II errors is the highest in area hospitals.

**Table 40: The Accuracy of Targeting Curative Care in MOH Facilities by Type of Facility**

| Strata/ Market | Income Quintiles | Number Who Received care | Number Who Paid Nothing | Percent Who Paid Nothing | Mean Payment | Median Payment | Share of Patients | Type I Error | Type II Error |
|---|---|---|---|---|---|---|---|---|---|
| **National Hospital** | 1 | 8,189 | 1,318 | 16.1% | 10.2 | 3.0 | 17.3% | | |
| | 2 | 5,454 | 1,770 | 32.5% | 6.2 | 1.0 | 11.5% | 77% | |
| | 3 | 10,295 | 3,330 | 32.3% | 6.3 | 2.0 | 21.7% | | |
| | 4 | 12,768 | 4,851 | 38.0% | 11.4 | 1.0 | 26.9% | | |
| | 5 | 10,739 | 1,867 | 17.4% | 113.3 | 5.0 | 22.6% | | 17% |
| | All | 47,445 | 13,137 | 27.2% | 32.5 | 2.0 | 100.0% | | |
| **Regional Hospital** | 1 | 7,640 | 3,129 | 41.0% | 5.0 | 1.0 | 19.5% | | |
| | 2 | 9,840 | 6,399 | 65.0% | 2.2 | 0.0 | 25.1% | 45% | |
| | 3 | 8,380 | 1,746 | 20.8% | 115.9 | 3.0 | 21.4% | | |
| | 4 | 7,951 | 2,679 | 33.7% | 31.5 | 2.0 | 20.3% | | |
| | 5 | 5,367 | 2,228 | 41.5% | 4.3 | 2.0 | 13.7% | | 42% |
| | All | 39,179 | 16,181 | 41.3% | 33.3 | 2.0 | 100.0% | | |
| **Area Hospital** | 1 | 4,010 | 1,673 | 41.7% | 3.1 | 2.0 | 52.2% | | |
| | 2 | 735 | 336 | 45.7% | 1.6 | 3.0 | 9.6% | 58% | |
| | 3 | 1,320 | 700 | 53.0% | 1.3 | 0.0 | 17.2% | | |
| | 4 | 258 | 163 | 63.2% | 9.2q | 0.0 | 3.4% | | |
| | 5 | 1,365 | 730 | 53.5% | 11.2 | 0.0 | 17.8% | | 53% |
| | All | 7,689 | 3,602 | 46.8% | 4.3 | 2.0 | 100.0% | | |
| **CESAR** | 1 | 36,206 | 2,114 | 5.8% | 2.5 | 2.0 | 26.9% | | |
| | 2 | 40,710 | 6,745 | 16.6% | 5.1 | 2.0 | 30.2% | 88% | |
| | 3 | 32,585 | 5,239 | 16.1% | 1.9 | 2.0 | 24.2% | | |
| | 4 | 20,422 | 2,788 | 13.7% | 1.9 | 2.0 | 15.2% | | |
| | 5 | 4,832 | 376 | 7.8% | 4.0 | 3.0 | 3.6% | | 8% |
| | All | 134,755 | 17,261 | 12.8% | 3.1 | 2.0 | 100.0% | | |
| **CESAMO** | 1 | 33,083 | 308 | 0.9% | 8.5 | 2.0 | 24.6% | | |
| | 2 | 23,142 | 3,922 | 16.9% | 2.5 | 2.0 | 17.2% | 92% | |
| | 3 | 23,949 | 5,226 | 21.8% | 2.2 | 2.0 | 17.8% | | |
| | 4 | 23,946 | 1,749 | 7.3% | 2.1 | 2.0 | 17.8% | | |
| | 5 | 12,262 | 1,094 | 8.9% | 5.7 | 2.0 | 9.1% | | 9% |
| | All | 116,452 | 12,371 | 10.6% | 4.4 | 2.0 | 86.4% | | |

Clearly, MOH facilities do a poor job of targeting the poor: too many of the poor who should be exempt from payment are paying for their care (Type I errors are too common), and too many of those who are not poor and should be paying for care are exempt from paying (Type II errors are too common). In all three of the different analyses discussed here (by type of illness, by strata, and by type of facility), an inverse relationship exists between the magnitude of Type I errors and the magnitude of Type II errors; in other words, where the poor are more likely to be charged for care, everyone is more likely to be charged for care, and where the poor are less likely to be charged for care, everybody is less likely to be charged. This implies that MOH facilities are not successful at

differentiating the income status of those who are charged and those who are not charged. Given the relatively high levels of utilization by all income groups, it would appear that the Type I errors are a more serious problem than the Type II errors; i.e., the more serious problem is that the poor are not identified as poor and are paying for care, and thus they are probably discouraged from going to MOH facilities for care when they need it.

### 5.1.5 A Particularly Glaring Inequality: Disproportionate Use of the National Hospitals by Relatively Well-to-Do Residents of Tegucigalpa

Persons in the two highest income quintiles who reside in metropolitan Tegucigalpa use a disproportionate amount of the ambulatory care provided by the national hospitals. Of those persons receiving ambulatory care for chronic illness in national hospitals, 43 percent resided in metropolitan Tegucigalpa, and 55 percent of the persons from Tegucigalpa who are treated in the national hospitals for chronic illness are from the fourth or fifth income quintiles. These 7,156 persons constitute 1.2 percent of the national population and had 19,098 visits, or 26 percent of the total chronic illness ambulatory care provided by the national hospitals.

The distribution of ambulatory treatment for acute illness provided in the national hospitals is even more skewed in favor of the residents of metropolitan Tegucigalpa. These residents receive 69 percent of the total ambulatory care for acute illness provided in the national hospitals, and 42 percent of them are from the fourth or fifth income quintiles. These 4,804 persons who reside in Tegucigalpa and are in the two highest income quintiles constitute 0.08 percent of the national population and had 6,755 visits, or 26 percent of the total acute illness ambulatory care provided by the national hospitals.

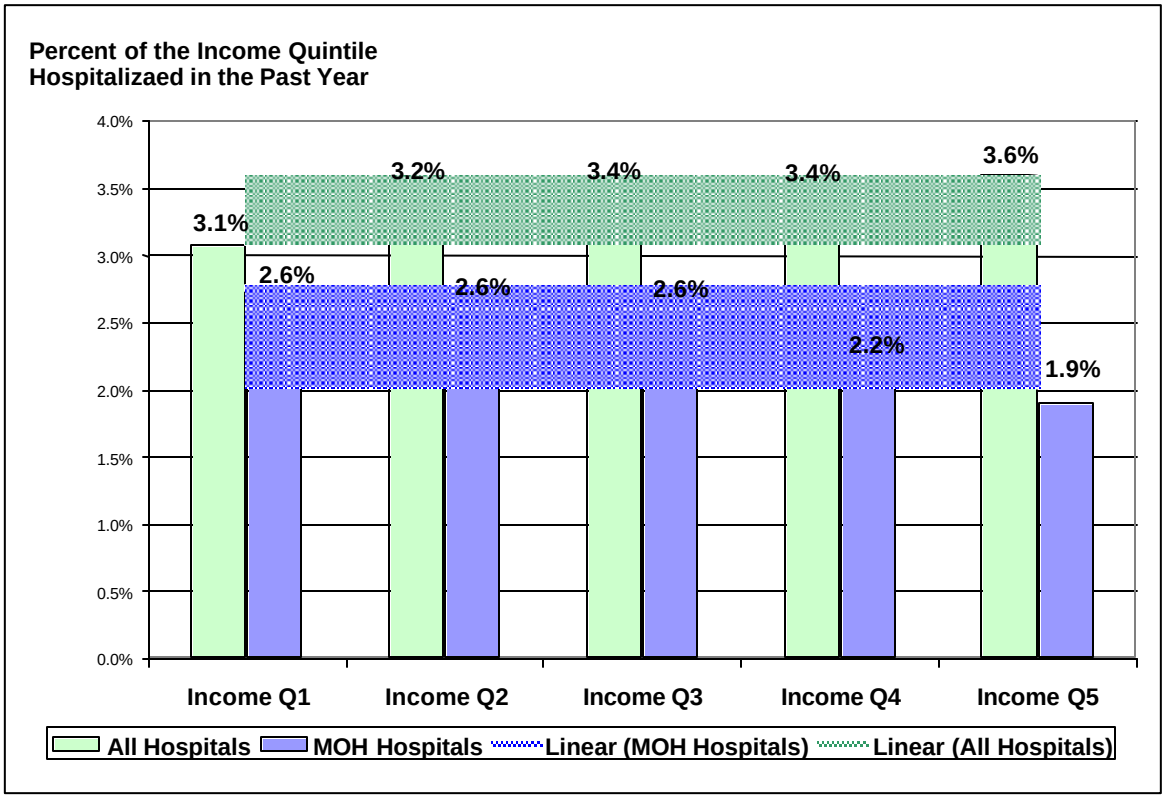
## 5.2 Assessment of the Equity of MOH Inpatient Care

The fact that hospitalization is much less common than outpatient care means that, even though the recall period for hospitalization is much longer than that for outpatient care, there are far fewer observations. The practical implication of this smaller number of observations is that it precludes conducting the same detailed level of analysis that was conducted on outpatient care.

### 5.2.1 Equity in the Use of MOH Inpatient Services: Self-Targeting

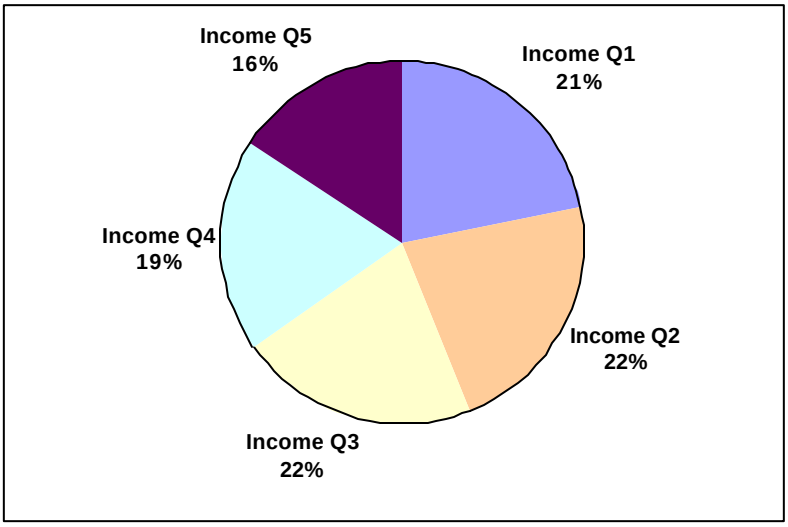
Figure 38 shows the proportion of persons hospitalized in the past 12 months at all hospitals and at MOH hospitals by income quintile. As the trend lines clearly show, as income increases, the percentage of each income class that is hospitalized in any hospital increases, but the percentage admitted to an MOH hospital falls. Thus, as income class increases, the proportion of persons who are hospitalized in an MOH facility falls. Whereas 84 percent of the lowest income quintile that was hospitalized in the past year was treated at an MOH facility, the same is true of only 53 percent of the highest income quintile. Higher income classes choose to seek hospital care outside of the MOH.

**Figure 38: Assessing the Extent of Self-Targeting by Income Quintile, in All Hospital versus MOH Hospitals**




The proportion of hospital patients that come from each income quintile is shown in Figure 39. As is readily evident, there is remarkably little variation across income quintiles.

**Figure 39: Proportion of MOH Hospital Patients in Each Income Quintile**



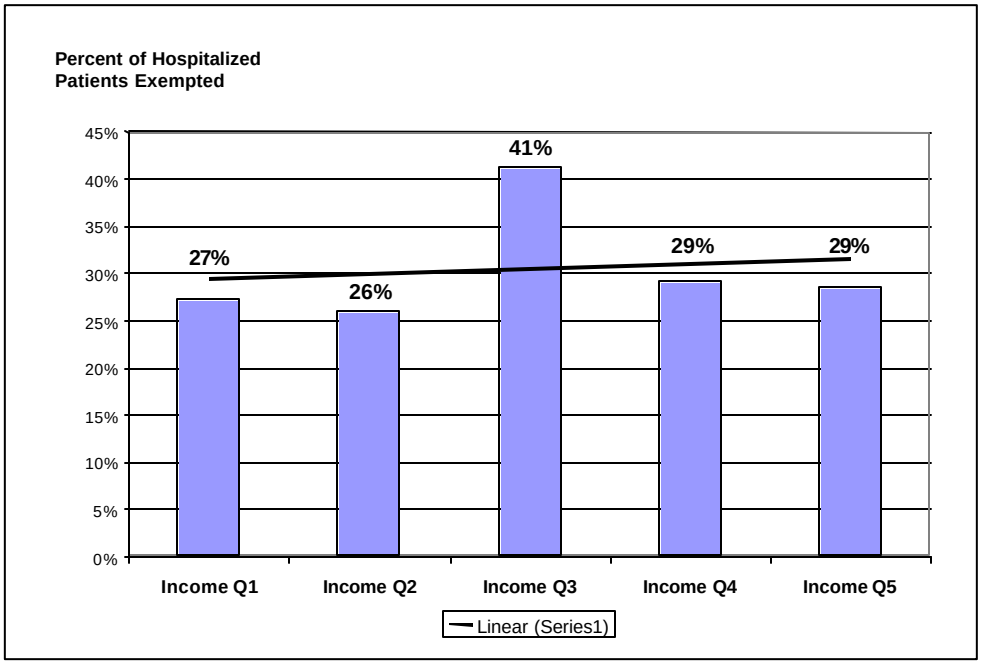
Even with the highest income quintile's hospitalization rate exceeding the lowest income's rate by 16 percent, the degree to which the highest income group voluntarily selects out of MOH care leaves its share of patients at 16 percent. Although this is less than the income quintiles share of population, it still constitutes a relatively high proportionate share of the MOH hospitals' patients and their costs. Self- targeting—the voluntary selection of a source of care other than the MOH by persons of adequate means—is occurring in a manner consistent with the Ministry's goal of focusing its services on low- and middle-income households. Again, while Hondurans' selection of hospitals results in self-targeting, one must ask whether the extent to which the self-targeting is occurring is adequate.

### 5.2.2 Equity in Payment Rates and Levels by Household Income Quintile

#### 5.2.2.1 The Proportion of Hospitalized Patients Exonerated from Payment by Income

Figure 40 shows the proportion of patients using MOH hospital care that were exonerated from payment, according to household income quintile. The goal in a system designed to protect the poor would be to have a steadily declining curve mapping out the relationship between these variables; the highest percent of exempted patients would be among the poor, and the percent of exempted patients would fall as income rises. Such is not the case in Honduras, however. Indeed, the fitted linear regression trend line in Figure 40 shows the relationship is just the opposite. It maps out a direct relationship between the level of exoneration and income: the two lowest income quintiles are the least likely to be exonerated from payment.

**Figure 40: Assessing MOH Hospital Care Targeting the Poor: The Proportion of Patients Exonerated from Payment by Income Quintile**



### 5.2.2.2 Absolute and Relative Inpatient User Fee Payments by Household Income Quintile

Figure 41 shows the average price paid for MOH hospital care. Neither the mean nor the median payment levels vary systematically with income quintile, but patients from the lowest income quintile on average pay 28 percent more than those of the highest income quintile and they pay significantly more than patients from any of the other income quintiles.[8] This is highly inequitable.

**Figure 41: Assessing the Extent of Hospitalization Targeting in MOH Facilities: The Average Price Paid by Income Quintile**

(All income: Mean = 109, Median = 40)

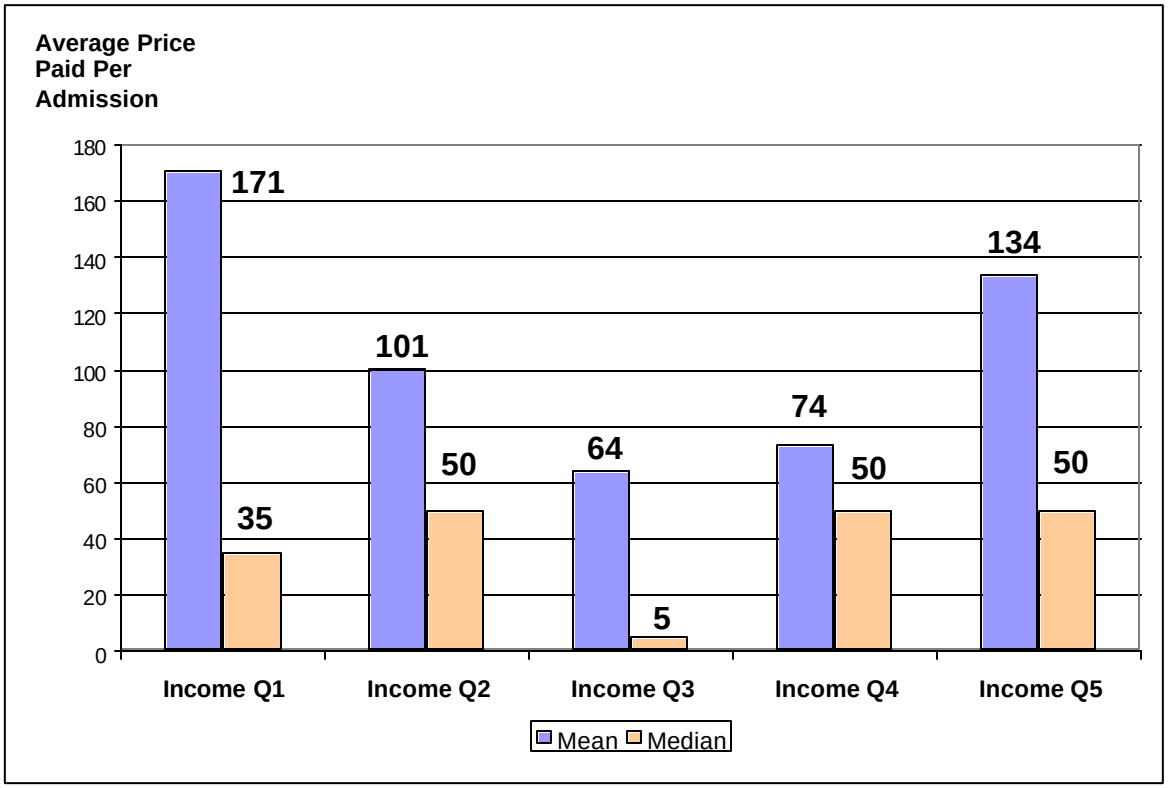



Figure 42 shows the average user fee payments as a percent of household income multiplied by 100 for each income quintile. Averaged over all income levels, this number is 139. Only the first income quintile pays a higher proportion than this, and it pays more than three times this amount. The mean payment level of the first quintile is statistically greater than that of each of the other four income quintiles.[9] The median amount paid by the lowest quintile is more than seven times greater than the median paid by all patients. There is an inverse relationship between the mean amount paid and the income quintile; as the income quintile increases, the mean payment decreases. The median maps out a similar inverse relationship that is characterized by even greater inequality. A regressive

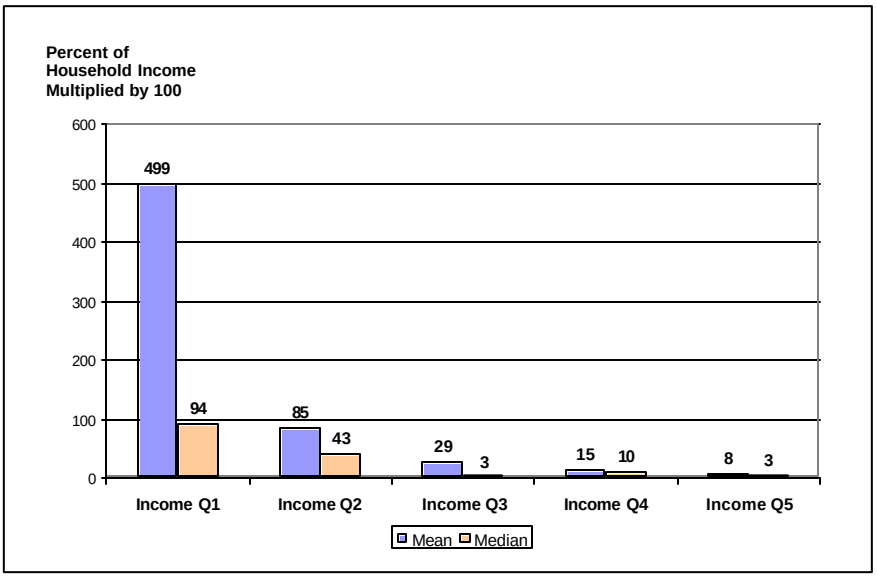
[8] T-tests of the differences in the mean payments of the first income quintile and each of the other four quintiles are all statistically significant at beyond the 99 percent level. The calculated t-statistics are as follows: for Q1 vs Q2, t=20.53; Q1 vs Q3, t=37.89; Q1 vs Q4, t=27.27; Q1 vs Q5, t=6.57.

[9] The calculated t-statistics of the differences between the first and each of the other quintiles are as follows: Q1 vs Q2, t=42.77; Q1 vs Q3, t=45.85, Q1 vs Q4, t=46.83; Q1 vs Q5, t=42.47.

user fee system is one that exacts a larger portion of the income of the poor than of the rich. The MOH's hospital user fees are highly regressive.

**Figure 42: Average MOH Inpatient User Fee Payments Relative to Household Income, Variations by Income Quintile**

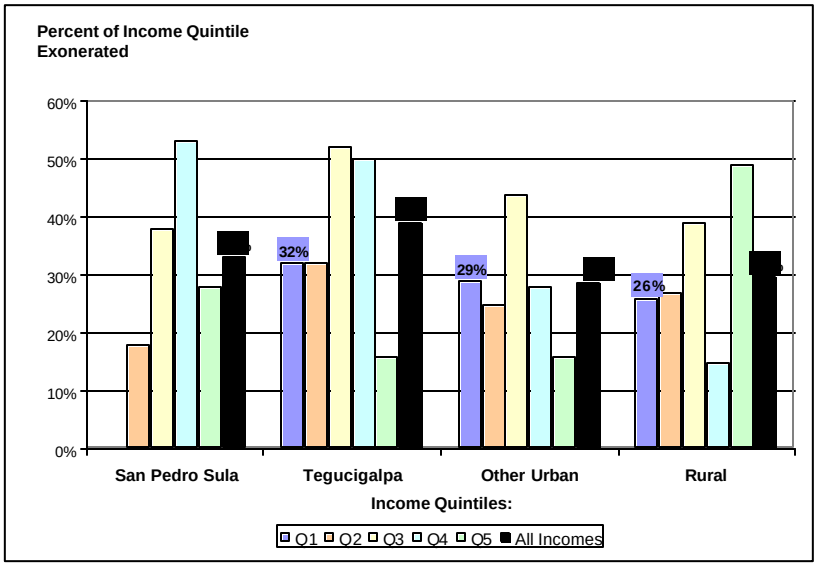
(All incomes: Mean = 139, Median = 13)




### 5.2.3 Equity in Inpatient User Fee Payments by Strata

Figure 43 disaggregates the national level analysis of the proportion of patients exempted from hospital care payment to the individual strata. In each of the strata, the lowest income quintile has the highest average user fee payments.

**Figure 43: The Proportion of MOH Hospital Patients Exonerated from Payment, by Income Quintile and Type of Strata**



### 5.2.4 Equity in MOH Inpatient User Fee Payment by Type of Facility

In the rural strata the average payment of the first quintile is more than 10 times larger than the average payment made by patients from other income quintiles. The inverse relationship between income and average user fee payment identified at the national level (refer back to Figure 38) is also reproduced across the five income groups within each of the four strata with only minor deviations (see Figure 44), as well as across strata (see Figure 45).

**Figure 44: Average MOH Inpatient User Fee Payments Relative to Household Income, Variations by Type of Hospital and Income Quintile**

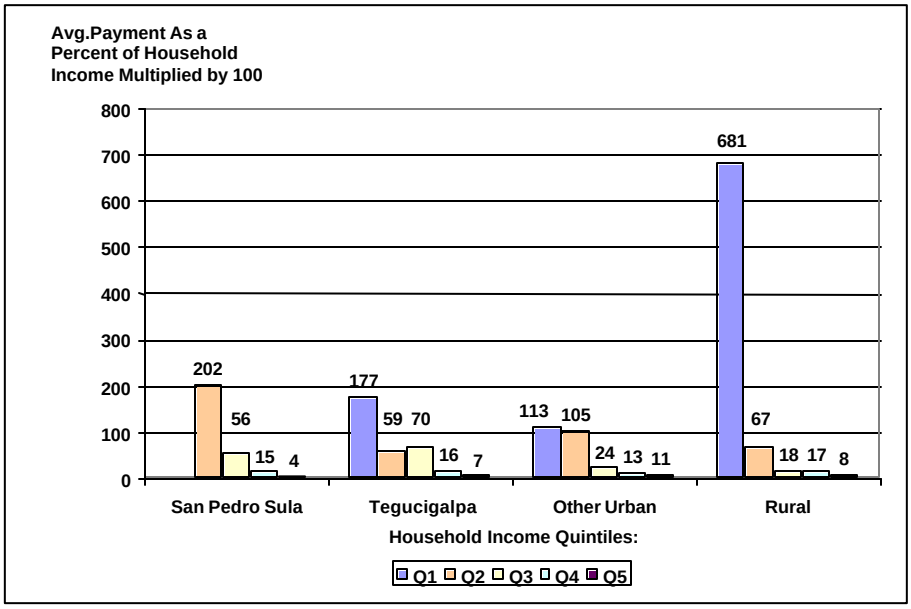
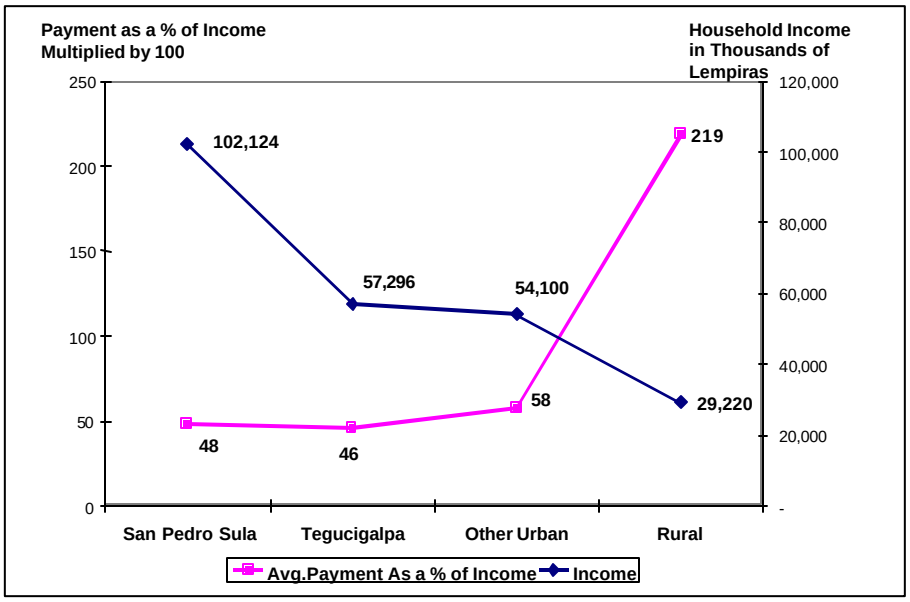



**Figure 45: MOH Hospital Inpatient Care Payments Relative to Income by Strata**



As is shown in Figure 46, the inverse relationship between income quintile and the level of the average user fee payment also characterizes each of the individual types of MOH hospitals.

**Figure 46: The Proportion of MOH Hospitalized Patients Exonerated from Payment, by Income Quintile and Type of Hospital**

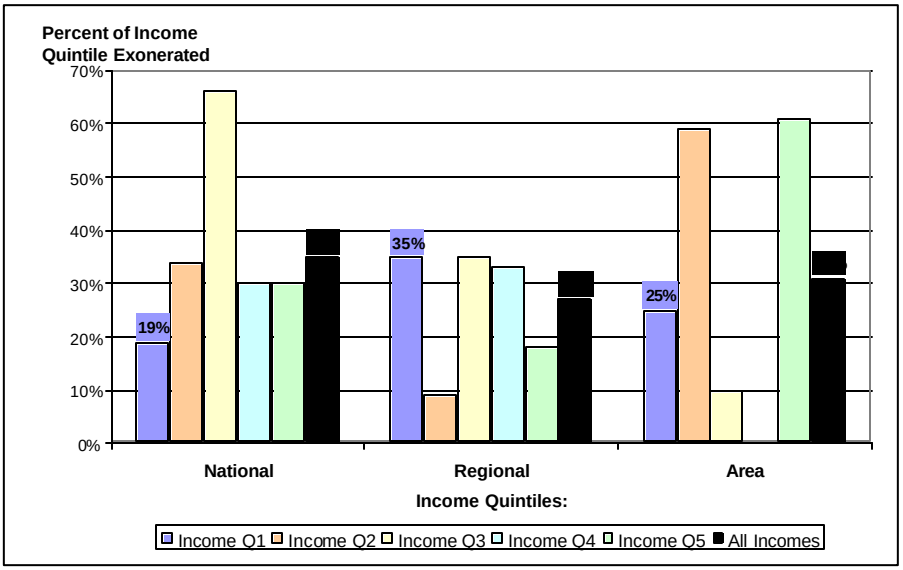
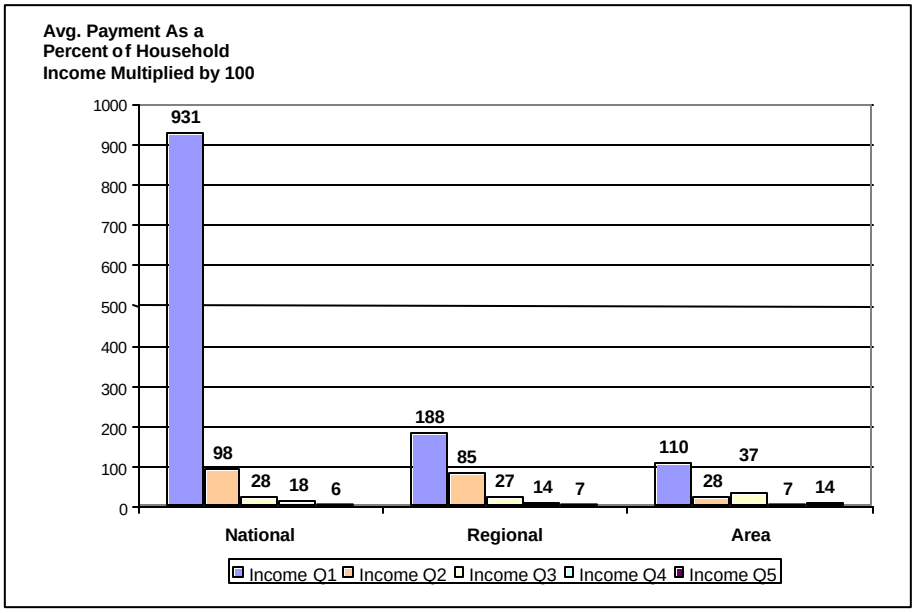



Figure 47 shows average hospitalization payments relative to income. In general, the poor pay more for inpatient care, irrespective of the type of MOH provider. However, the greatest inequality exists in national hospitals, where the poor pay more than 10 times the average user fee paid by the four higher income quintiles.

**Figure 47: Average MOH Inpatient User Fee Payments Relative to Household Income, Variations by Type of Hospital and Income Quintile**



## 5.3 Equity Analysis Conclusion

In sum, the user fee system of the MOH of Honduras could be doing a much better job of protecting the poor. The poor are more likely to pay for curative outpatient care, for preventive outpatient care, and for inpatient care than the average Honduran. In fact, in most of the analyses conducted in Honduras, the poor have a higher likelihood of having to pay for care than do patients from any other income quintile. Moreover, in most instances, MOH facilities have been found to charge the poor larger fees (in absolute terms) than those charged to the average patient. This finding persists whether the analysis is conducted at the national level, within any of the four strata, or within any of three types of MOH hospitals (with one exception—regional hospitals). Specifically, for curative outpatient care, the poor pay almost exactly the same absolute amount that all patients pay on average, and they pay twice the proportion of their income. In the case of hospitalization, the mean amount and average amount that the poor pays as a percent of income are both higher than that of any other income quintile. The Honduran MOH's user fee system is regressive, highly inequitable, and in need of reform.

# 6. Conclusions and Recommendations

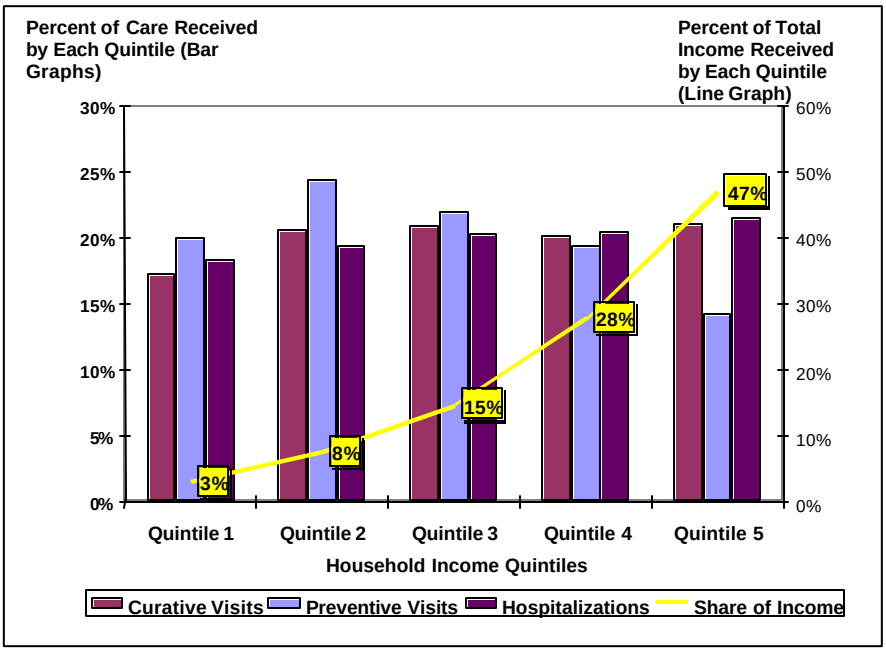
## 6.1 The Performance and Role of the MOH (As Empirically Identified)

By international standards, the health care system of Honduras does an adequate job of providing coverage of health services to the whole population. Nationally, its production of ambulatory care services exceeds the WHO benchmark of 2.0 consultations per person per year. Its hospitalization rate, however, is low, substantially lower than other Central American countries at a similar level of development. There is remarkable equity in the utilization of health care services in Honduras.

As Figure 48 demonstrates, the level of use of health care services is largely independent of household income. In short, as judged by these important, fundamental performance indicators, the general health care system of Honduras is doing a good job.

**Figure 48: Distribution of Health Care and Household Income**

Includes all sources of care




The role of the MOH in the health care system of Honduras has been identified in this study by looking at its mix of services and clientele and juxtaposing them with those of other agents in the market, both public and private. The MOH provides 59 percent of the ambulatory care visits and 71 percent of hospital admissions. IHSS is a relatively minor player, with less than 4 percent of the ambulatory care market and 7 percent of the hospital market. The private, commercial sector accounts for most of the remaining care in these markets. The MOH provides a disproportionate

amount of the care for infectious diseases, for preventive care, and for all care provided to children, especially those less than five-years old. In short, the MOH is the chief provider of primary health care services in Honduras. Partly because of its self-appointed role as the chief provider of preventive and primary health care services, and partly because of the substantial differences in the cost of care provided by the public sector compared to the private sector, the MOH provides a disproportionate amount of care to women and children—the portions of a population who are, at once, the principal beneficiaries of most primary health care services and the segments of Honduran society that generally are at a relative disadvantage in terms of their access to adequate amounts of money with which to pay for medical care.

## 6.2 The Honduran Private Sector and Common Public-Private Sector Dynamics

There are a host of reasons why the private health sector is relatively underdeveloped in Honduras. In part, it is due to the low absolute level of per capita income in Honduras. It is also due in part to the private sector being "crowded out" of the health care market by the combination of widely available, free or near free, MOH services, combined with a social security system that has its own health care delivery system in which modern sector workers and their employers are mandated to participate. This is a common scenario characterizing many Latin American countries. In such countries, the private sector in general, and particularly the more costly and higher priced private hospital sector, is usually small because the vast majority of would-be private patients is already paying social security for health insurance coverage, and few are willing or able to purchase additional insurance or to pay out of pocket for relatively expensive private care. In effect, the private sector has been "crowded out" of these markets.

In Honduras this is reflected in the lopsided private shares of curative ambulatory and inpatient care, 44 and 29 percent, respectively. In the case of Honduras, the private sector has not been as adversely affected by the presence of the social security system because of the institute's relatively meager coverage and low level of financing. The major constraint to the more rapid growth and the larger market share of the private sector in Honduras is the MOH with its large and still growing infrastructure, its provision of a substantial amount of free curative ambulatory and hospital care, and the low prices it charges for care.

The experience in most Latin American countries has been that after a slow, protracted start, the private sector has been growing in recent years, both in absolute terms and relative to the public sector. In some cases, this growth has been the product of change in the nature of the social security system—such as in Nicaragua, where it was privatized, or in countries like Peru or El Salvador, where less radical reforms were introduced (Fiedler 1996a). In other cases, including Ecuador and Guatemala, change occurred because the quality of care provided by the persistently under-financed MOH deteriorated to such an extent that a growing number of people chose to pay for the more expensive, but better quality, private care (Fiedler 1996b, Fiedler and Nelson 1996). In most countries that have a pluralistic health system, the growth of the private sector has also been a side product of general economic development. Health care is generally an income elastic good. This means that as income levels rise, a larger proportion of income is generally spent on health care. Furthermore, in countries with pluralistic health care systems, the income elasticity of private health care is greater than that of public health care. As a result, as average incomes increase there is a substitution of private sector care for public sector care. In this gradual, market-directed manner, economic development has brought increasing average income levels and with it a growing private health sector.

What little evidence exists about the private sector in Honduras shows that, although this trend of a growing private sector characterizes the Honduran health care market, the concomitant transformation of the health sector is occurring in Honduras at a relatively slow pace. This evidence comes as a comparative analysis of the 1998 ENIGH and the National Health Expenditure Survey (NHES) conducted in 1995 (World Bank, 1997). Over the period between these two surveys, the amount of ambulatory care provided by the private sector increased, although only modestly (by 3 percent), while private hospital admissions grew rapidly, by 25 percent. With the size of the MOH's infrastructure and its total service production continuing to grow briskly throughout this period, the share of the private sector in the ambulatory care market actually declined slightly—from 45 to 44 percent—while its share of hospitalizations increased from 14 to 20 percent.

The relatively slower pace of private expansion in Honduras is partly due to the country's relatively slow economic performance over this period, owing most notably to the devastation caused by Hurricane Mitch, which ravaged Honduras in 1998. In part, it is also due to the fact that MOH prices are low, and, for the most part, have remained unchanged since 1990. (See Fiedler, et al., 2000, for a detailed analysis.) It is exceedingly important to recognize that by keeping its prices low, the MOH of Honduras has not only maintained greater access to care for the poor, but given the way in which the user fee system was developed and implemented, it has also discouraged the growth of the private sector. In the following paragraphs, the discussion turns to a closer examination of the costs of maintaining the current system, a preliminary exploration of the implications of reforming the system, and some suggestions as to how to do so.

## 6.3 MOH User Fee Levels, Public-Private Interactions and Incentives

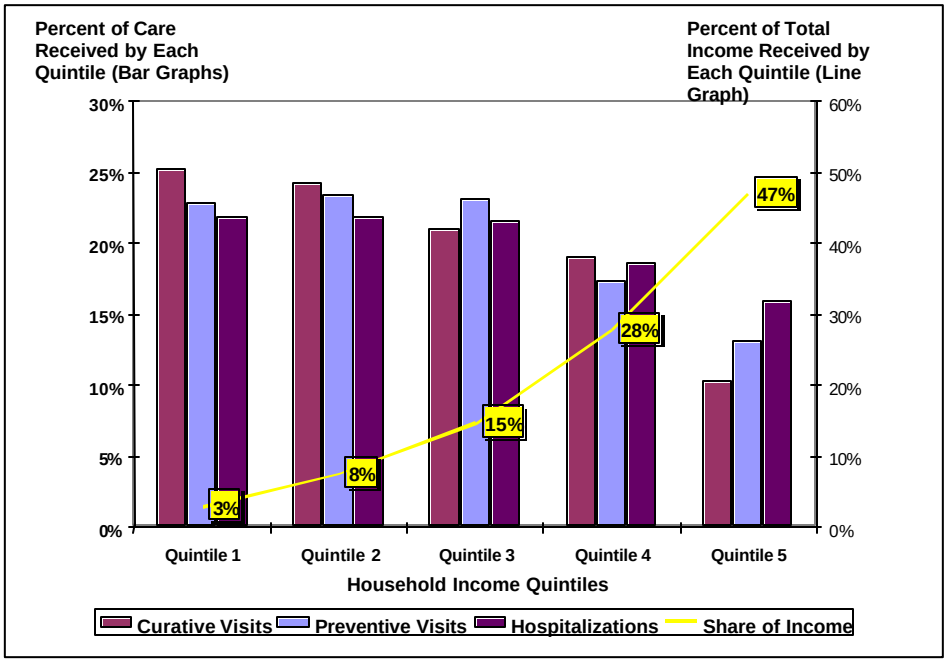
The price of MOH care is low in both absolute and relative terms. As noted in Chapter 4, the average MOH mean price of an acute ambulatory care visit is 4.4 lempiras, equal to 0.03 percent of the average per capita income. MOH mean prices are the equivalent of the following:

- 3 percent of what a private patient pays to treat an acute illness
- 5 percent of what a private patient pays to treat a chronic ailment
- 2 percent of what a private patient pays for a hospital stay.

These public-private price differences are enormous. No doubt the magnitude of these differences has encouraged many people with the ability to pay for private provider care to continue using MOH services. As a result, it may be inferred that a substantial proportion of upper income persons continue to turn to the MOH for their health care. What does the evidence show?

As already demonstrated, there is a relatively high degree of equality in the use of health care services (of all sources) by household income quintile (refer to Figure 48). When the analysis is narrowed to MOH services, a clear inverse relationship between the proportion of care provided by the Ministry and household income quintile is readily evident, as may be seen in Figure 49.

**Figure 49: Distribution of MOH Care and Household Income**




This reflects the fact that persons in progressively higher income quintiles increasingly choose to seek care out of the MOH market and, for the most part, opt into the private sector. This should be regarded as a positive development because it means the MOH has more resources with which to address the health care needs of a smaller population; i.e., it can provide more and better quality services to its now smaller clientele. Despite this trend of voluntary movement out of the MOH market, however, a large proportion of the total medical care of persons with higher income continues to be provided by the MOH.

What are the opportunity costs of maintaining the status quo of the MOH continuing to provide the current levels of subsidies for the health care of middle and upper income Hondurans? To the extent that persons in higher income quintiles are turning more often to the MOH for their care, they may be pushing other, lower income persons out of the MOH market and, because they are using relatively scarce MOH resources, they may be undermining the quality of care received by these lower income persons. One way in which the quality of care may be undermined is in the provision of less adequate supplies of medicines, other materials, examinations, and equipment, which patients must then be directed to purchase elsewhere. In other words, there is a direct relationship between MOH care being provided to persons who could afford to purchase it at higher prices and the frequency and magnitude of purchases that MOH patients are directed to make from other sources because the MOH facilities are not adequately stocked and equipped. This is not meant to suggest that this is the only reason why patients are prescribed medicines, other supplies, exams, and equipment and directed to purchase them elsewhere. It may also be due to the nature of the pyramidal referral system, wherein, by design, lower tiers of care are not as well stocked or well equipped.[10] As noted in Chapter 4, the lower income quintiles are the least likely to comply with these prescriptions for ancillary goods and services—probably reflecting an income constraint. To the extent that these

[10] Additional reasons were also discussed in Chapter 4.

ancillary goods and services are prescribed because of financial shortfalls, it means that the relatively well-to-do are being provided MOH care at the expense of the quality of care provided to all other MOH patients. The fact that they are unable to purchase prescribed ancillary services and must go without them means that the poor are being provided a lower quality of care than they might otherwise receive.

Furthermore, there is an equity issue as well. As discussed in Chapters 4 and 5, the incidence of Type I and Type II errors is high; many of the poor pay for care and many of the relatively well-to-do do not pay anything for their care. Generally, a smaller proportion of the well-to-do pay for their MOH care than do the poor. Moreover, those that do pay generally pay very little, oftentimes less than the poor pay in absolute terms. The MOH user fee system is regressive and needs to be reformed to address these inequalities and to free up resources currently being used to oversubsidize the medical care of persons who are able to pay more for their care. This would allow the MOH to better address other, higher priorities.[11]

The Ministry needs to explore alternative means by which to segment the market and charge persons with different income levels different amounts. At the very least, it needs to increase the general fee levels and introduce a system for identifying and exonerating the poor. How much to increase fee levels and how to define and identify "the poor" are critically important, unanswered questions. These are important questions that reflect the role and values of the MOH and Honduran society and merit public discourse. Before the discussions begin, however, there are other related matters that need to be identified and incorporated into the agenda.

## 6.4 Other Considerations in Setting the Public User Fee Discussion Agenda

While the Honduran health care delivery system is generally doing a good job overall, there are particular areas where its performance has lagged. In particular, there appears to be inadequate coverage of many preventive services, including growth monitoring, prenatal care, and family planning. In addition, Honduras has the highest HIV/AIDS prevalence rate in continental Latin America and much more work needs to be done to stem the course of this epidemic (World Bank, 1997, p.3). If the Ministry devoted more resources to these problems, it could more effectively address them. How might it do so? Where might it get the increased resources? There are several options that could be used individually or in combination:

- Increase the budget the MOH receives from the central government
- Eliminate the institutional user fee systems in the CESARs and CESAMOs and possibly in the health regions
- Increase MOH cost recovery by increasing user fees and restructuring the fee system

[11] In many countries, Type I errors are a reflection of the maldistribution of resources. That is, they reflect the overconcentration of resources in higher tiered facilities, which are more visible and are commonly more vociferous and politically savvy, at the expense of the lower tiered facilities. The result of this over-concentration of resources in the higher tiered facilities is that there is relatively greater pressure at the lower tiered facilities to charge for care—to charge everyone for care and to charge more for care—so that these revenues can be used to purchase relatively more scarce drugs and other supplies. Whether or not this is an accurate description of Honduras as well is not known. It is recommended that a study of the allocation patterns of MOH resources be done to enable addressing this issue effectively.

- Reallocate MOH resources from other activities to provide more support of these services.

For purposes of this discussion it will be assumed that the first alternative listed is not a viable MOH policy option, as the size of the MOH budget is determined by other agents and is outside the Ministry's control. The second option is likely to be a surprising one that seems, at face value, to be self-defeating. This suggestion is based on a recent study of the MOH user fee system that found that the costs of administering the system are high relative to the income it generates (Fiedler, et al., 2000). The study estimated the administrative costs of the institutional user fee system in 1999 were 23 million lempiras, the equivalent of two-thirds of its revenue.[12] The magnitude of the cost burden was found to vary from a low of 12 percent in national and regional hospitals, to 45 percent in area hospitals, and reaches an astonishing 332 percent in CESAMOs and CESARs. In other words, for each lempira that is generated by the institutional user fee system in CESAMOs and CESARs, 3.32 lempiras are spent to administer the system. For the regions as a whole (i.e., just the area hospitals, CESAMOs, and CESARs), administrative costs are 166 percent of their revenues. That is, for every 1.00 lempira in revenues the regional office systems bring in, 1.66 lempiras are spent.

Clearly, if the purpose of the institutional user fee system is to contribute to cost recovery in the regions, and particularly in the CESAMOs and CESARs, the MOH would be better off without it. Elimination of the institutional user fee system in the regions would actually save the MOH money and/or enable its facilities to provide more care. To discourage trivial, wasteful use of MOH services and to accommodate the MOH's need for additional resources, it is recommended that the MOH maintain its user fee system, but with modifications. In order to make the user fee system worthwhile as a cost recovery tool, the system must, at a minimum, pay for itself. That is the third option.

As already alluded to, a user fee system can be useful and important for reasons other than cost recovery. A properly structured and functioning user fee system can also be used to target resources to particular clientele or particular services. It can do so by establishing differential fees that encourage or discourage the use of services by particular groups or types of persons. For instance, it can charge some persons, such as the relatively well-to-do, higher fees to improve MOH cost recovery and encourage them to use alternative sources of care (e.g., IHSS or the private sector), which will either generate more revenues or free up MOH resources to provide more care or a higher quality of care to other persons. Similarly it can charge some persons, such as the poor, less in order to reduce or eliminate financial obstacles to their seeking care. In addition, relative prices of different sources of care can be structured so as to provide financial motivation to people to seek care first at the lower cost, lower tiers of care, and thereby reduce costs and improve the efficiency of the MOH. Also, prices of some care—such as preventive services—can be provided free of charge to encourage their use. The findings of this study suggest that consideration should be given to having lower fees for chronic patients. Those with chronic illness are more likely to be poor, their average fees per consultation are nearly double the level of an acute illness visit, and by virtue of their illness being recurrent, they are likely to use relatively more health care, other things being equal. Thus chronic care is a relatively greater financial burden, and it falls disproportionately on the poor, who are the least able to pay for it.

[12] This estimate of the administrative costs underestimates actual total costs. It was judged that the development of complete cost estimates would have been too time-consuming and would have made the survey that was used to develop the estimates too cumbersome and disruptive to the activities of facility staff. It is thought that the estimates presented here account for 75 to 90 percent of the total and probably more seriously underestimate the costs of the higher level facilities.

A user fee system, therefore, must strike something of a balance between these various, oftentimes competing goals—the most prominent tradeoff being that of ensuring access and generating revenues. How best to strike that balance depends on the relative importance of each of the considerations that go into designing them. This is not the place to develop a definitive blueprint as to how best to effectuate these changes and strike these balances in Honduras. Instead, it is recommended that a widely representative working group of Hondurans be convoked to work on this important, multifaceted task. The working group should identify the specific goals and priorities of the MOH, translate those goals and priorities into relevant MOH performance indicators and guidelines, integrate the findings of this study, along with those of the aforementioned user fee study (Fiedler, et al., 2000), and construct a new MOH user fee policy.

Among the major issues that this working committee would need to address would be the following: Who are the priority clientele of the Ministry? How should the Ministry define "the poor"? How can this definition be operationalized so as to devise a method or methods for identifying them? How large a group is this, and what would be the revenue implications of exonerating all of them from paying for care or maintaining their current levels of payment, while increasing the revenue of other, non-poor persons? How can those who are not poor be identified and Type II errors reduced? How often should these screening tools be applied? How often should they be updated? Would it be feasible to issue identification cards in order to standardize the criteria at the national level and to ease the administrative burden of applying this type of targeted approach?

It would be useful to have some type of national policy framework to provide a standardized, national set of parameters that reflects a consensus about what an MOH user fee policy, with its multitude of sometimes conflicting goals, should strive to do. The already cited, recently completed user fee system study revealed a number of inconsistencies across health regions, which suggest that a national policy statement would be useful to clarify what the Ministry regards as essential, inviolate policies. Such a statement could also address policies where the Ministry is willing to be flexible and deconcentrate responsibility to MOH regional offices or individual MOH facilities, or devolve authority to local health committees or municipal governments.

The fourth option listed above is to reallocate MOH resources from other activities to provide more support of these services. Some of the findings of this study reveal that national health policy goals are sometimes subordinated to a subnational or local financial imperatives. This is where the possibility of developing explicit criteria and a widely known, readily transparent, resource allocation process might be useful.

The advantage of adopting a resource allocation tool approach is that it is a more comprehensive approach to policy. It enables one not only to address the shortcomings of the user fee system, but also to address other MOH resource allocation shortcomings that are closely related to user fees. A major motivation for combining this approach with a user fee system reform is that it can be a useful tool by which to defuse what might otherwise be unintended consequences of user fee reform. For instance, if national policy establishes that the poor are to be exempted from paying anything or very much for care, in the poorest areas of the country where a large proportion of the entire population is poor, adhering to this policy might make it difficult to generate adequate revenues to keep facilities adequately stocked with medicines and other supplies. This may frustrate health workers who may see it as undermining their revenue generation and cost-recovery efforts, and they may choose to ignore the national policy. This may be one of the motivations for charging people for services that the MOH mandates are to be provided free of charge, as was found in this study. Adopting a resource allocation approach, rather than simply trying to reform the user fee system, provides additional tools by which to better ensure that intended results are more likely to be realized. In this example, for instance, a resource allocation approach could adopt an approach that allocates additional monies to

facilities or regions based on the estimated number of poor persons they are treating, and thereby help to defuse potential local MOH employee opposition from exempting the poor.

The Ministry should review its traditional approach to resource allocation to ensure it is consistent with MOH goals and objectives. Reform of the user fee system should be part of this process so as to better ensure that financing issues are at once addressed as systematically and comprehensively as possible, rather than undertaking distinct reforms for user fees and for resource allocation processes. This will reduce the likelihood that there will be inconsistent aspects of policy that might otherwise undermine effectiveness, compliance, or morale. Ensuring that this process is highly participatory and highly visible is indispensable to its outcome being seen as fair and being accepted widely, and to its product serving the MOH and the people of Honduras well into the future.

Addressing the additional topics of providing better and more comprehensive care to low- and middle-income Hondurans at more equitable prices; more aggressively attacking the AIDS/HIV problem; improving facilities' supplies of drugs and other medical supplies, equipment, and materials; and increasing efforts to motivate demand for preventive services are alternatives ways in which the MOH could better spend its resources. As has been shown, the MOH is currently using these resources to provide services free of charge or at very low fees to persons who have adequate means to purchase the services, to pay more for the services from the MOH, or to purchase these services from a private sector provider.

In sum, there are a number of reasons to take exception with the current MOH fee structure and to regard continuing the current level of subsidy for all Hondurans, regardless of need, as unacceptable. The MOH needs to generate more revenues to provide more and better care. In addition, the MOH could do much more with the resources it is devoting to paying for a large proportion of the health care of relatively well-to-do Hondurans. Hondurans now need to discuss and order their priorities in terms of how best to structure the MOH's user fee system and how best to allocate the Ministry's resources. Rather than regarding these as separate activities, it is recommended that the effort to reform the user fee system be considered part of the reform of the entire resource allocation process of the MOH.

## 6.5 Recommendations

It is recommended that the MOH do the following:

- Undertake a publicity campaign to improve the general public's awareness and understanding of the Ministry's policy of free care for priority services.
- Increase fee levels in order to increase revenue generation and cost recovery and to provide greater incentives for Hondurans who have the ability to pay to self-select out of MOH services and into the private, commercial sector, thereby easing the Ministry's resource constraint.
- Restructure fee levels so that they cascade in a more pronounced fashion from the relatively higher levels at the higher tiered, more costly to operate facilities to the lower tiered, less costly facilities (i.e., from national hospitals to regional hospitals, to area hospitals, to CESAMOs, to CESARs) in order to encourage the more efficient use of the MOH's pyramidal referral system and to encourage vertical equity.

- Develop, publicize, and train MOH personnel in the application of a screening device for identifying the poor and exempting them from payment.

- Convoke a working group comprised of persons from all levels of the MOH (local, regional, and central), from the association of municipal governments (*Asociación de Municipios de Honduras*), the Ministry of Finance, the agency in charge of overseeing the Government of Honduras' international debt relief program (*Unidad de Apoyo Técnico*), and representatives of agencies with experience in identifying the poor (e.g., *Programa de Asignación Familiar*, or Benefits Program for Needy Families, and *Fondo de Inversión Social*, Social Investment Fund), to work on reforming the user fee system.[13]

- Make user fee reform part of a larger reform involving the MOH's more general resource allocation process.

[13] A more detailed, substantive, and procedural proposal for reforming the user fee system is presented in a companion piece, "An Assessment of the Ambulatory Care User Fee Systems in Ministry of Health Facilities in Honduras" (PHR, November 2000). The major findings of the current report have added to, and are generally consistent with, this earlier analysis. The recommendations presented here should be integrated into the earlier document's more comprehensive reform agenda and process.

# Annex A: Additional Tables on Self-Treatment

**Annex A-1: Persons Who Reported Self-treating by Type of Illness**

| | Total Respondents | Persons Who Self-treated | |
|---|---|---|---|
| | | Number | Percent |
| Acutely Ill | 799,253 | 392,934 | 49% |
| Chronically Ill | 269,111 | 78,291 | 29% |
| Both | 14.377 | 8,920 | 62% |
| Illness Type Not Specified | 66,240 | 21,907 | 33% |
| **All Persons** | **1,148,981** | **502,052** | **44%** |

**Annex A-2: Self Treatment and Care Seeking Behavior by Type of Illness**

Includes Only Persons Who reported Their Type of Illness

***A. By Action Taken***

| Self-Reported | Persons Who Did Nothing | | Persons Who Only Self-Treated | | Persons Who Only Sought Care | | Persons Who Both Self-Treated and Sought Care | | All Persons | |
|---|---|---|---|---|---|---|---|---|---|---|
| Health Status | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Acutely Ill Only | 43,237 | 76% | 327,369 | 85% | 363,082 | 67% | 65,566 | 68% | 799,254 | 74% |
| Chronically Ill Only | 11,329 | 20% | 49,206 | 13% | 179,492 | 33% | 29,085 | 30% | 269,112 | 25% |
| Both | 2,554 | 4% | 6,849 | 2% | 2,902 | 1% | 2,071 | 2% | 14,376 | 1% |
| All Persons | 57,120 | 100% | 383,424 | 100% | 545,476 | 100% | 96,722 | 100% | 1,082,742 | 100% |

***B. By Type of Illness***

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Acutely Ill Only | 43,237 | 5% | 327,369 | 41% | 363,082 | 45% | 65,566 | 8% | 799,254 | 100% |
| Chronically Ill Only | 11,329 | 4% | 49,206 | 18% | 179,492 | 67% | 29,085 | 11% | 269,112 | 100% |
| Both | 2,554 | 18% | 6,849 | 48% | 2,902 | 20% | 2,071 | 14% | 14,376 | 100% |
| All Persons | 57,120 | 5% | 383,424 | 35% | 545,476 | 50% | 96,722 | 9% | 1,082,742 | 100% |

# Annex B: Additional Tables on Insurance

**Annex B-1**
**Prevalence of Health Insurance**

| Strate / Market | Number of Respondents | Persons Reporting They Have Health Insurance | | Annual Amount Paid for Health Insurance | |
|---|---|---|---|---|---|
| | | Number | Percent | Total | Average |
| Metropolitan Tegucigalpa | 32,550 | 7,731 | 24% | 1,820,897 | 236 |
| Metropolitan San Pedro Sula | 27,563 | 7,131 | 26% | 7,699,488 | 1,080 |
| Other Urban Areas | 60,884 | 6,632 | 11% | 1,868,108 | 282 |
| Rural Areas | 88,806 | 896 | 1% | 225,875 | 252 |
| Nationwide | 209,803 | 22,390 | 11% | 11,614,368 | 519 |

# Annex B-2
# Reimbursed Health Care Expenditures

## Hospital Expense

| | No. of Persons | % of Hospitalized | Total Amount | Avg.Per Person |
|---|---|---|---|---|
| IHSS | 397 | 0.2% | 1,643,602 | 4,140 |
| Private Insurance | 984 | 0.5% | 9,022,124 | 9,169 |
| Employer | 1,635 | 0.8% | 14,682,937 | 8,980 |
| Other | 653 | 0.3% | 625,373 | 958 |
| **Nationwide** | **3,669** | **1.7%** | **25,974,035** | **7,079** |

## Acute Illness Outpatient Care

| | No. of Persons | % of Acute Patients | Total Amount | Avg.Per Person |
|---|---|---|---|---|
| IHSS | 121 | 0.1% | 16,500 | 136 |
| Private Insurance | 2,479 | 1.2% | 2,154,865 | 869 |
| Employer | 1,713 | 0.8% | 858,621 | 501 |
| Other | 295 | 0.1% | 883,920 | 2,996 |
| **Nationwide** | **4,608** | **2.2%** | **3,913,906** | **849** |

## Chronic Illness Outpatient Care

| | No. of Persons | % of Chronic Patients | Total Amount | Avg.Per Person |
|---|---|---|---|---|
| IHSS | 0 | 0.0% | | |
| Private Insurance | 434 | 0.1% | 496,621 | 1,144 |
| Employer | 2,025 | 0.7% | 2,455,882 | 1,213 |
| Other | 458 | 0.2% | 169,330 | 370 |
| **Nationwide** | **2,917** | **1.0%** | **3,121,833** | **1,070** |

## Preventive Outpatient Care

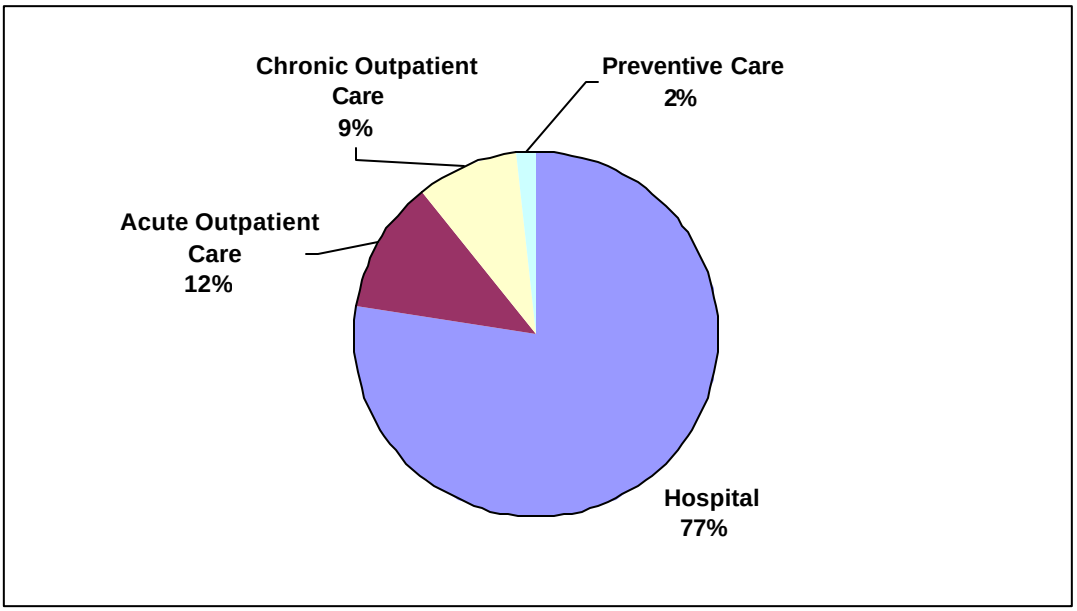
| | No. of Persons | % of Preventive Patients | Total Amount | Avg.Per Person |
|---|---|---|---|---|
| IHSS | 0 | 0.0% | | |
| Private Insurance | 1,000 | 0.1% | 450,338 | 450 |
| Employer | 370 | 0.1% | 20,017 | 54 |
| Other | 44 | 0.0% | 52,968 | 1,204 |
| **Nationwide** | **1,414** | **0.2%** | **523,323** | **370** |

# Annex B-3
# Reimbursed Health Care Expenditures

| | Hospital Expense Reimbursement | | | | |
|---|---|---|---|---|---|
| | No. of Persons | % of Hospitalized | Total Amount | Avg.Per Person | % of Insureds' Expds Reimb'd |
| IHSS | 397 | 0.2% | 1,643,602 | 4,140 | 100% |
| Private Insurance | 984 | 0.5% | 9,022,124 | 9,169 | 86% |
| Employer | 1,635 | 0.8% | 14,682,937 | 8,980 | 77% |
| Other | 653 | 0.3% | 625,373 | 958 | 9% |
| Nationwide | 3,669 | 1.7% | 25,974,035 | 7,079 | 71% |

| | Acute Illness Outpatient Care | | | | |
|---|---|---|---|---|---|
| | No. of Persons | % of Acute Patients | Total Amount | Avg.Per Person | % of Insureds' Expds Reimb'd |
| IHSS | 121 | 0.1% | 16,500 | 136 | 37% |
| Private Insurance | 2,479 | 1.2% | 2,154,865 | 869 | 64% |
| Employer | 1,713 | 0.8% | 858,621 | 501 | 78% |
| Other | 295 | 0.1% | 883,920 | 2,996 | 100% |
| Nationwide | 4,608 | 2.2% | 3,913,906 | 849 | 71% |

**Annex B-4: Third Party Reimbursement of Patient Costs by Payor**
**Total Reimbursements = $33.5 Million Lempiras**



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